



# Massachusetts Pregnancy Risk Assessment Monitoring System (PRAMS) 2007 Surveillance Report



Massachusetts Department of Public Health  
Bureau of Family Health and Nutrition  
Office of Data Translation

October 2009



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**Massachusetts PRAMS Report 2007**

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October 2009

## Acknowledgments

This report was prepared by Candice Belanoff, Emily Lu, Hafsatou Diop, and Susan E. Manning of the Office of Data Translation, Bureau of Family Health and Nutrition.

Special thanks go to:

Diane Gradozzi, Roger Wong, Carol Davin, Office of Data Translation; Nancy Wilber, Karin Downs, Ron Benham, Bureau of Family Health and Nutrition; Sally Fogerty, Children's Safety Network; Paola Gilsanz, Bureau of Community Health Access and Promotion; Alice Mroszczyk, Privacy and Data Access Office; The Research and Data Access Review Committee; The PRAMS Advisory Committee.\*

Stanley Nyberg, Jane Purtill, Maria Vu, Kevin Foster, Charlene Zion, Sharon Pagnano, and Karin Barret, Registry of Vital Records and Statistics;

Wanda Barfield, Hollie Clark, Letitia Williams, and Seema Gupta, Centers for Disease Control and Prevention;

We wish to also thank DPH peer reviewers for their comprehensive review of this publication.

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*\*See Appendix F for an alphabetical list of PRAMS Advisory Committee Members*

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## Executive Summary

This report contains results from analyses of data from the 2007 Massachusetts Pregnancy Risk Assessment Monitoring System (PRAMS). Massachusetts (MA) PRAMS is a collaborative surveillance project between the Centers for Disease Control and Prevention (CDC) and the Massachusetts Department of Public Health. PRAMS collects state-specific, population-based data on maternal attitudes and experiences before, during, and shortly after pregnancy. In 2007, MA PRAMS disproportionately sampled by race/ethnicity to ensure adequate representation of racial/ethnic minority women. A total of 2,343 mothers were sampled and 1,489 responded to the survey, for a weighted response rate of 70%. Final results were weighted to represent the cohort of MA-resident women who delivered a live infant in 2007. Results from PRAMS are used to assess the health of mothers and infants across the state. This represents the first report of results from the Massachusetts PRAMS project.

The following highlights some key findings contained in this report.

### Pre-pregnancy:

- *Pregnancy intention and birth control use:* Over 40% of mothers indicated that they had not been trying to become pregnant when they did. Among those not trying to become pregnant, almost 60% were not using any birth control at the time.
- *Fertility treatment:* Almost 8% of mothers reported that they had used some form of fertility treatment when they became pregnant.

### Pregnancy:

- *WIC:* Almost 40% of births overall were to mothers enrolled in the Special Supplemental Nutrition Program for Women, Infants and Children (WIC).
- *Gestational Diabetes:* Seven percent of women reported that they had gestational diabetes mellitus (GDM), or diabetes that started during their pregnancy. The prevalence of GDM was highest among non-Hispanic mothers whose race was classified as "other," mothers age 40 or older, and those who were obese immediately before becoming pregnant.
- *Intimate Partner Violence:* Almost 4% of women reported that they experienced physical abuse from an intimate partner either in the 12 months before they became pregnant, or during their pregnancy. The prevalence of report of intimate partner violence was highest among Hispanic (10.8%) and Black, non-Hispanic mothers (7.2%), and those living below 100% of the Federal Poverty Level (8.9%).
- *Prenatal care:* Over 85% of mothers reported that they initiated prenatal care within the first trimester of pregnancy. First-trimester initiation of care was lowest among those under 20 years of age (62.3%) and those with less than high school education (68.9%). The most frequently cited barriers to getting care as early as wanted were not being able to get an earlier appointment, and not having a Medicaid card.

- *HIV testing:* About 58% of mothers reported that they received an HIV test during their pregnancy. Overall, under three-quarters reported that they were offered a test. Women who were under age 20, as well as Black, non-Hispanic women were more likely than others to report being offered an HIV test.
- *Mode of delivery:* Over 34% of women reported that their babies were delivered by cesarean delivery (c-section).
- *Cesarean request:* Overall, about 12% of mothers reported that it was their idea to have a c-section delivery. Among those with a previous c-section, almost 25% reported that it was their idea to have a c-section before labor began. However, among those delivering by c-section for the first time, just over 3% reported that they had requested the c-section before labor.

#### **Post-Partum:**

- *Self-rated health:* Over 95% of mothers rated their own health as good, very good or excellent, and less than 5% as fair or poor. Mothers living in poverty and those with less than a high school education were the most likely to report fair/poor health (13.1% and 13.8%, respectively.).
- *Post-partum depression:* Almost 10% of mothers reported that they felt depressed often or always post-partum. Among these women, only 40% reported seeking help for depression from a health care provider.
- *Infant sleep position and location:* Over 74% of mothers reported placing babies to sleep only on their backs and over 80% reported that their babies slept in a crib or bassinet alone.
- *Breastfeeding:* Overall, about 81% of mothers reported initiating breastfeeding. Highest rates of initiation were observed among Other, non-Hispanic mothers (91.4%), those age 40 or older (93.7%) and those with a college degree (88.6%).

#### **Substance use:**

- *Alcohol:* Over 11% of mothers reported drinking alcoholic beverages during the last 3 months of pregnancy.
- *Tobacco:* Almost 9% of mothers reported using tobacco during the last 3 months of pregnancy. The prevalence of tobacco use was highest among those with less than a high school education (18.3%) and those living below poverty (16.7%).

#### **Oral health:**

- Almost 90% of mothers reported that they had ever received a teeth cleaning.
- Mothers who were Hispanic or who had less than high school education were the least likely to have ever received a teeth cleaning.
- Nearly 74% reported that they had received a teeth cleaning at least once since the year before they became pregnant.

## Introduction

The Pregnancy Risk Assessment Monitoring System (PRAMS) is a collaborative surveillance project of the Centers for Disease Control and Prevention (CDC) and state health departments. PRAMS collects state-specific, population-based data on maternal attitudes and experiences before, during, and shortly after pregnancy. Mothers are sampled for participation between two and six months post-partum, with the majority sampled two months post-partum. The goal of the PRAMS project is to improve the health of mothers and infants by supporting the reduction of adverse outcomes such as low birth weight, infant morbidity and mortality and maternal morbidity.

Begun in 1987 as part of the CDC's initiative to reduce infant mortality and low birth weight, in recent years the program has been expanded in support of the CDC's Safe Motherhood Initiative to promote healthy pregnancies and the delivery of healthy infants. Currently, thirty-seven states, New York City, and South Dakota (Yankton Sioux Tribe) participate in PRAMS. States participating in PRAMS now account for 75% of all U.S. births.

Massachusetts PRAMS began collecting data in 2007. This represents the first report of results from the Massachusetts PRAMS project. A copy of the complete MA PRAMS survey can be found in Appendix B.

## Methodology

The Massachusetts Pregnancy Risk Assessment Monitoring System (PRAMS) is an ongoing, population-based surveillance system designed to identify and monitor selected maternal attitudes, experiences and behaviors that occur before, during and after pregnancy. PRAMS was initiated in 1987 as part of the Centers for Disease Control and Prevention (CDC) initiative to reduce infant mortality and low birth weight. In recent years, the program has been expanded in support of CDC's Safe Motherhood Initiative to promote healthy pregnancies and the delivery of healthy infants. Massachusetts PRAMS began collecting data in 2007.

The PRAMS survey consists of three types of questions. All surveys include a required set of questions ("Core" questions), which allow for multi-state analyses. Each state can select additional questions from a CDC-approved-questions list ("Standard" questions), or can create questions tailored to meet its needs ("State-developed" questions). The MA PRAMS 2007 survey included a total of 80 questions: the 54 Core questions required by CDC, 16 Standard questions and 10 Massachusetts-developed questions (see Appendix B for copy of 2007 Massachusetts PRAMS survey). The questionnaire was administered in English and Spanish only.

PRAMS survey participants were sampled from a frame of eligible birth certificates which included all live-born infants born to Massachusetts-resident women, delivered in the state, for whom a birth certificate was available. Based on CDC's PRAMS protocol, stillbirths, fetal deaths, induced abortions and multiple-births with quadruplets or more were excluded from the sampling frame.

For the 2007 sample, Massachusetts used a stratified sampling methodology, sampling disproportionately from four racial/ethnic groups: White, non-Hispanic, Black, non-Hispanic, Hispanic, and all Other, non-Hispanic. All but White, non-Hispanic mothers were over-sampled to improve precision in examining disparities by race/ethnicity. The category of Other, non-Hispanic includes all racial/ethnic groups besides White, Hispanic and Black mothers. In Massachusetts, this category contains predominantly Asian mothers. Due to small numbers, Asian mothers, as well as those of other smaller racial/ethnic groups, were grouped into the category of "Other, non-Hispanic." With additional years of data, Massachusetts will be able to separately analyze outcomes for these smaller populations. Additional demographic information was obtained from the birth file, including maternal education, age and country of birth.

Women who were two to six months post-partum were selected to receive up to three mailed paper surveys. Women who had not responded to the survey after the third mailing were contacted by telephone. Approximately three percent of MA women with a live-birth in our study period were sampled. The data were weighted using selected maternal demographics to account for non-response and adjusted for sampling probabilities and coverage to represent the Massachusetts birth population in 2007.

Analyses for the Massachusetts PRAMS 2007 report were conducted accounting for the stratified sampling method, and including final survey weights. SAS version 9.1 and SUDAAN version 10 were used to produce prevalence and bivariate statistics.

## **Limitations**

Due to the exclusion criteria for the Massachusetts PRAMS survey, the data presented in this report are generalizable only to pregnancies resulting in a live birth of singletons or multiples of fewer than 4, to Massachusetts residents who gave birth in the state.

The PRAMS survey is only administered in English and Spanish at this time. This presents a limitation in collecting data from mothers who speak neither survey language.

Because PRAMS is based on self-reported information, there is the potential for misclassification error. Bias may occur if some groups of mothers may recall experiences more or less accurately than others.

Income data were collected, however, almost 11% of respondents declined to report income, and analyses involving household poverty could not include these respondents.

Lastly, while PRAMS data are weighted to reflect the population of women giving birth in Massachusetts in 2007, 30% of those surveyed did not respond to this survey and results may be biased if weighting did not account for certain characteristics or experiences associated with non-response.

## PRAMS SAMPLE CHARACTERISTICS (Weighted)

### **Race/ethnicity and nativity**

After applying sampling weights, PRAMS 2007 respondents were largely reflective of the overall population of MA mothers. White, non-Hispanic mothers constituted almost 68% of the sample, Hispanics represented about 14%, Other, non-Hispanic mothers almost 10%, and Black, non-Hispanics 8%. About 31% of mothers were not born in the United States.

### **Marital Status**

About one third (34.2%) of mothers were unmarried.

### **Parity**

Almost 53% of mothers in our sample had previously given birth to a live-born infant.

### **Education**

Most mothers, over 89%, had at least a high school education, with 45% having a college degree.

### **Age**

Almost 90% of mothers were between 20 and 39 years of age. Almost 7% were under age 20 and over 4% were 40 years or older.

### **Income and public assistance**

Almost 22% of mothers were living at or below the Federal Poverty Level\* (FPL) in the year before their babies were born. Almost 88% of mothers lived in a household where at least some income was from employment and over 14% received some form of public assistance.

### **Disability**

Over 5% of mothers reported having a current emotional or physical disability. Most indicated that the disability had existed for at least a month.

*\*See Appendix A for technical note on the calculation of household poverty level.*

## PRAMS SAMPLE CHARACTERISTICS (Weighted)

**Table 1. Maternal Characteristics, PRAMS respondents vs. state birth population, 2007 MA PRAMS**

Characteristic	Sample n	Weighted %*	se**	State %
<b>Maternal race/ethnicity</b>				
White, non-Hispanic	445	67.9	0.3	66.7
Black, non-Hispanic	310	8.2	0.1	8.1
Hispanic	379	14.3	0.2	13.7
Other, non-Hispanic	355	9.7	0.1	10.0
<b>Maternal age (years)</b>				
<20	112	6.8	0.9	6.4
20-29	643	40.3	1.7	40.9
30-39	682	48.5	1.7	48.4
40+	52	4.4	0.7	4.4
<b>Maternal education</b>				
<High school	201	10.9	1.0	11.0
High school diploma	404	26.6	1.6	25.3
Some college	298	16.8	1.3	21.9
College graduate	585	45.6	1.7	41.9
<b>Household poverty status (approximate)***</b>				
≤100% Federal Poverty Level (FPL)	390	21.7	1.4	n/a
>100% Federal Poverty Level (FPL)	926	78.3	1.4	n/a
<b>Maternal nativity</b>				
Non-US-born	800	31.3	1.2	29.7
US-born	689	68.7	1.2	70.3
<b>Marital status</b>				
Unmarried	598	34.2	1.6	33.5
Married	891	65.8	1.6	66.4
<b>Sources of income</b>				
Paycheck	1210	87.8	1.1	n/a
Public assistance	277	14.5	1.1	n/a
Family/friends	188	12.2	1.2	n/a
Busniess, other income	64	5.7	0.9	n/a
Child support/alimony	49	3.4	0.7	n/a
Social Security, etc.	44	3.1	0.6	n/a
Unemployment	49	2.7	0.5	n/a
Other	40	2.5	0.5	n/a
<b>Maternal disability</b>				
No	1346	94.7	0.8	n/a
Yes	72	5.3	0.8	n/a
<b>Days disabled</b>				
Non-disabled	1346	95.9	0.8	n/a
1 to 29 days	9	0.4	0.2	n/a
30+ days	41	3.7	0.7	n/a
<b>Parity</b>				
No previous live births	667	47.1	1.8	45.1
Previous live births	795	52.9	1.8	54.9

\*Does not include missing in proportions

\*\*Standard Error

\*\*\*See Appendix A for explanation of "poverty level" used in this report.

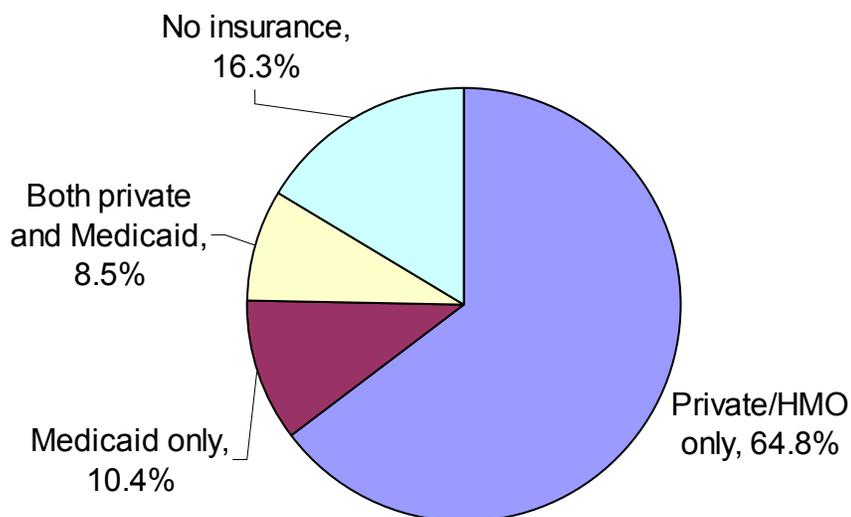
## PRE-PREGNANCY

### Pre-pregnancy health insurance

Having a source of health insurance is essential to accessing health care. Pregnant women who do not have a source of insurance may delay entry into prenatal care (Egerter, 2002).

Prior to pregnancy, 64.8% of mothers had a source of private/HMO health insurance, 18.9% were enrolled in Medicaid, 8.5% had both private and Medicaid coverage, and 16.3% had no source of health insurance (Figure 1).

**Figure 1. Prevalence of insurance types prior to pregnancy, 2007 MA PRAMS**



#### **Massachusetts mothers say...**

*“The healthcare costs in Massachusetts are an increasingly worrisome problem for young families. There needs to be more done for families who are just getting started and do not make as much as they will in ten years or so....”*

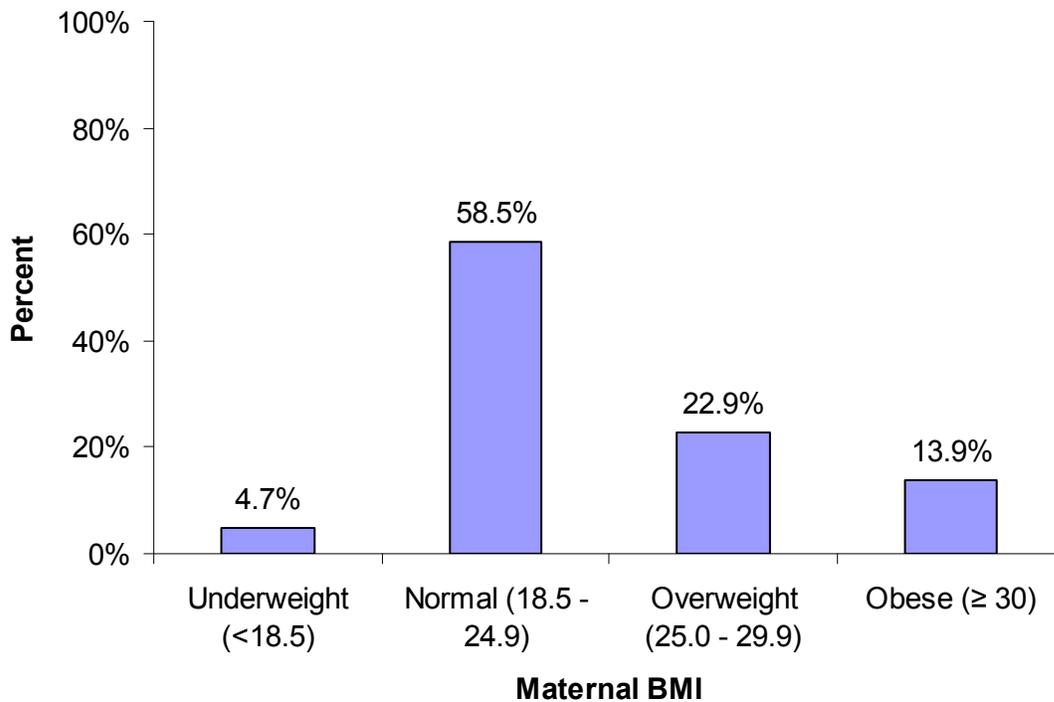
## PRE-PREGNANCY

### Body Mass Index (BMI)

Women who are overweight or obese when they become pregnant may have greater risk of health complications including hypertension, gestational diabetes, higher risk of Cesarean delivery and stillbirth (Baeten, 2001, Kristensen, 2005).

More than half of mothers, 58.5%, reported having a normal BMI prior to becoming pregnant. Almost 23% reported being overweight and almost 14% obese (Figure 2).

**Figure 2. Maternal Body Mass Index (BMI) prior to pregnancy, 2007 MA PRAMS**

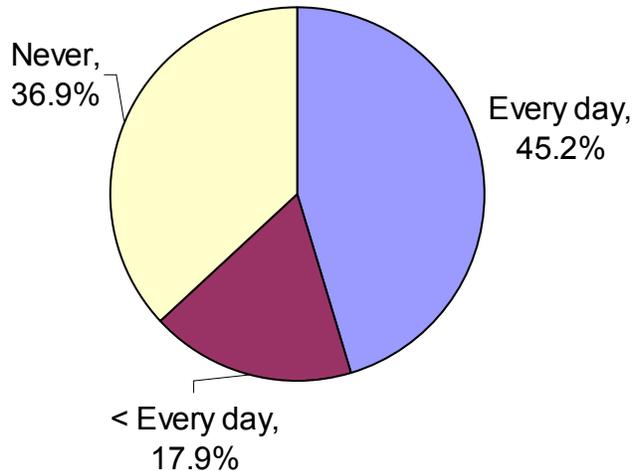


## PRE-PREGNANCY

### Prenatal multivitamin use

Multivitamins containing folic acid may reduce the risk of neural tube defects in developing embryos (Milunsky, 1989). There have recently been increased efforts to deliver this important public health message to women of childbearing age who may be considering becoming pregnant.

**Figure 3. Prevalence of multivitamin use in the month prior to pregnancy, 2007 MA PRAMS**



Over 45% of mothers reported taking multivitamins every day of the week in the month before becoming pregnant. However, another 40% reported *never* taking them during that time (Figure 3).

Black, non-Hispanic mothers, (25.1%), those with less than a high school education (18.5%), those under age 20 (13.3%), and those living in poverty (19.9%) were the least likely to take multivitamins every day (Table 2).

**Table 2. Prevalence of daily multivitamin use in the month prior to pregnancy, by socio-demographic characteristics, 2007 MA PRAMS**

	Weighted n	Weighted %	95% CL
<b>Maternal race/ethnicity</b>			
White, non-Hispanic	19863	39.2	34.5 , 43.9
Black, non-Hispanic	1526	25.1	20.4 , 29.9
Hispanic	3041	28.6	24.1 , 33.1
Other, non-Hispanic	3081	42.7	37.6 , 47.8
<b>Maternal age (years)</b>			
<20	680	13.3	6.0 , 20.6
20-29	8067	26.9	22.2 , 31.7
30-39	16938	46.8	41.8 , 51.7
40+	1827	55.8	39.2 , 72.4
<b>Maternal education</b>			
<High school	1508	18.5	12.7 , 24.4
High school diploma	5812	29.5	23.1 , 35.8
Some college	4231	33.7	26.1 , 41.2
College graduate	15961	46.8	41.6 , 52.0
<b>Household poverty level</b>			
>100% FPL	22245	41.8	37.6 , 46.0
≤100% FPL	2876	19.9	14.7 , 25.1
<b>Maternal nativity</b>			
Non-US-born	7418	31.8	27.7 , 35.9
US-born	20093	39.2	34.8 , 43.6

## PRE-PREGNANCY

### Pregnancy intention

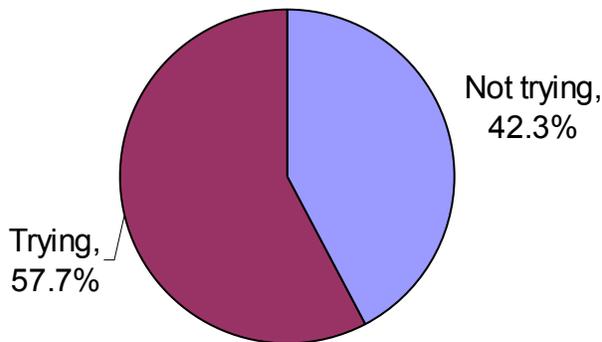
The PRAMS survey measures two distinct elements of pregnancy intendedness: whether the mother had been actively *trying* to become pregnant at the time of conception, and how she *felt* about becoming pregnant right before the pregnancy occurred.

Having an unplanned pregnancy could result in later awareness of the pregnancy and subsequently later cessation of dangerous health behaviors, such as smoking or substance use. Later awareness might similarly delay entry into prenatal care.

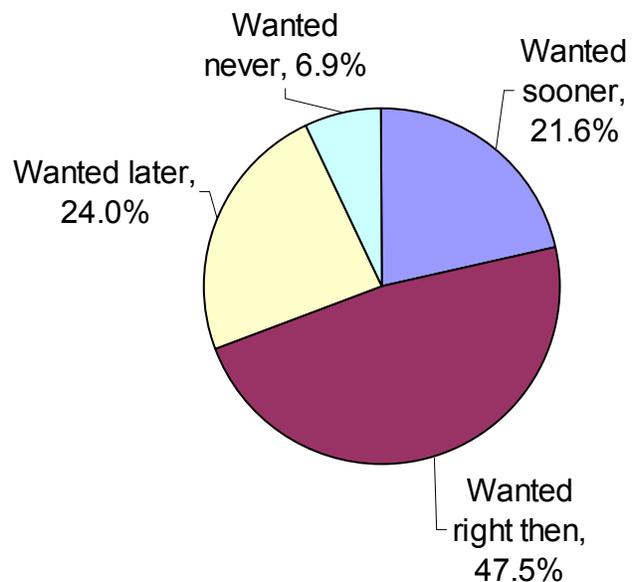
Over 40% of mothers reported that they had *not been* trying to become pregnant when they conceived (Figure 4).

Among all mothers, 69.1% reported that they had wanted the pregnancy then or sooner, and almost 31% had wanted the pregnancy either later or never (Figure 5).

**Figure 4. Proportion of women trying to become pregnant, 2007 MA PRAMS**



**Figure 5. Feelings about becoming pregnant prior to this pregnancy, 2007 MA PRAMS**



## PRE-PREGNANCY

### Pregnancy intention

The proportions of mothers reporting they had *not* been trying to become pregnant were highest among Black, non-Hispanics (65.3%), those with less than HS education (76.2%), living in poverty (72.7%), or unmarried (71.1%). Women who reported a history of physical abuse were also more likely to report not having tried to become pregnant than those who did not report abuse (61.6% vs. 41.5%). (Table 3).

In the table below, we looked more closely at women under age 20, finding a distinct gradient by age among adolescents. All women aged 15 and under, 96% of those aged 16-17, and 79% of those aged 18-19 reported that they had not been trying to become pregnant when they did.

Similar socio-demographic patterns were observed in reports of wanting the pregnancy “later or never” as were observed for the question around trying to become pregnant. However, in almost all categories, fewer women reported not wanting a pregnancy than reported not trying to become pregnant.

**Table 3. Prevalence of pregnancy intention and feelings about the timing of most recent pregnancy, by socio-demographic characteristics and history of abuse, 2007 MA PRAMS**

	% Who had not been trying to become pregnant			% Who had wanted pregnancy later/never		
	Weighted n	Weighted %	95% CL	Weighted n	Weighted %	95% CL
<b>Maternal race/ethnicity</b>						
White, non-Hispanic	18599	37.0	32.2 , 41.7	12567	25.3	20.9 , 29.7
Black, non-Hispanic	3917	65.3	60.0 , 70.5	3103	51.2	45.7 , 56.8
Hispanic	6014	57.5	52.6 , 62.5	4922	46.9	41.9 , 52.0
Other, non-Hispanic	2757	38.6	33.4 , 43.8	2041	28.7	23.8 , 33.6
<b>Maternal age (years)</b>						
≤15	333	100.0	100.0 , 100.0	304	91.4	74.2 , 100.0
16-17	1655	96.4	91.5 , 100.0	1655	96.4	91.5 , 100.0
18-19	2421	79.1	65.5 , 92.6	2163	70.6	56.5 , 84.8
20-29	15694	53.1	47.6 , 58.5	11760	40.0	34.6 , 45.3
30-39	10340	28.7	24.3 , 33.1	6243	17.5	14.0 , 21.1
40+	846	26.4	13.0 , 39.8	508	16.0	5.5 , 26.4
<b>Maternal education</b>						
<High school	6145	76.2	70.2 , 82.1	4590	56.5	47.3 , 65.6
High school diploma	11119	56.5	49.6 , 63.4	8803	45.2	38.3 , 52.0
Some college	5774	46.3	38.4 , 54.1	3861	30.9	24.0 , 37.9
College graduate	8222	24.4	20.1 , 28.8	5350	16.1	12.4 , 19.8
<b>Household poverty level</b>						
>100% FPL	16782	32.0	28.0 , 35.9	11842	22.8	19.3 , 26.2
≤ 100% FPL	10605	72.7	67.0 , 78.4	7979	55.1	48.2 , 62.0
<b>Maternal nativity</b>						
Non-US-born	11038	48.3	43.6 , 53.0	7886	34.8	30.3 , 39.3
US-born	20250	39.7	35.3 , 44.1	14747	29.1	25.1 , 33.1
<b>Marital status</b>						
Married	13384	27.5	23.7 , 31.3	8313	17.3	14.1 , 20.5
Unmarried	17904	71.1	66.2 , 76.0	14320	56.7	51.2 , 62.3
<b>History of physical abuse</b>						
No	28750	41.5	37.9 , 45.0	20804	30.3	27.0 , 33.6
Yes	1692	61.6	46.5 , 76.6	1343	47.8	32.9 , 62.8

## PRE-PREGNANCY

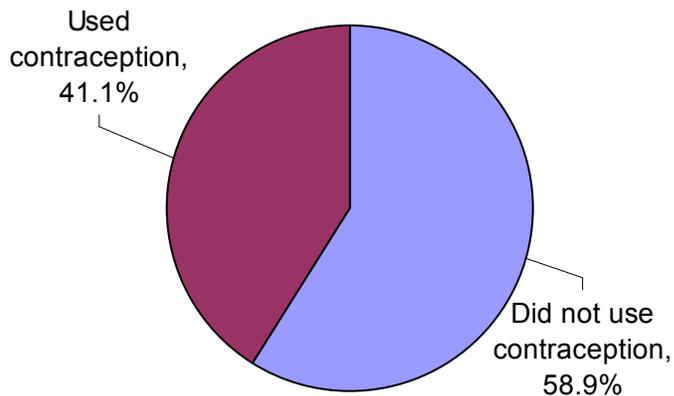
### Contraception use

Key to successful family planning programming and policy is understanding why women who were not intending to become pregnant did not or could not use a method of contraception. Better understanding of these issues will likely lead to more effective efforts to improve access to and utilization of contraception.

PRAMS mothers who had *not* been trying to become pregnant were asked whether they or their partners had been “doing anything to keep from getting pregnant” at the time.

Among those who reported that they had *not* been trying to become pregnant, nearly 60% reported *not* using any forms of contraception.

**Figure 6. Prevalence of pre-pregnancy contraception use among women who were not trying to become pregnant, 2007 MA PRAMS**

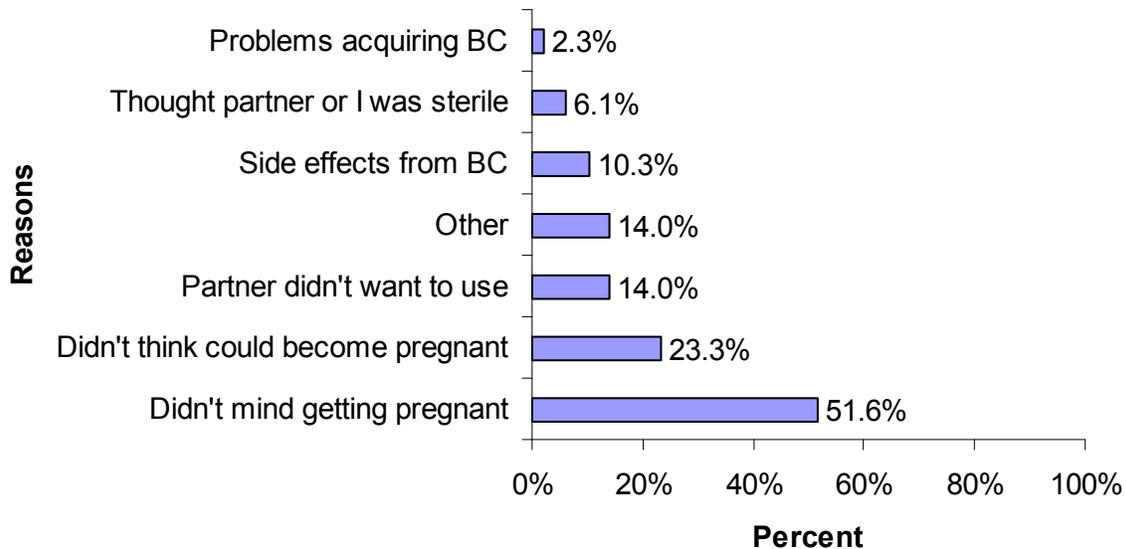


## PRE-PREGNANCY

### Contraception use

Top reasons for not using any contraception included mothers not minding getting pregnant (51.6%), mothers believing that it wasn't possible to get pregnant at that time (23.3%), and husbands/partners not wanting to use birth control (14.0%) (Figure 7).

**Figure 7. Reasons for not using a contraceptive method prior to this pregnancy, 2007 MA PRAMS**



### Emergency contraception

The majority of women, almost 85%, reported knowing about emergency contraception or the “morning after” pill before becoming pregnant.

Women who reported that they had wanted to become pregnant later or never were less likely (77%) to report knowing about the morning after pill.

**Table 4. Proportion of women who reported knowing about emergency contraception (the “morning-after pill”), 2007 MA PRAMS**

	Weighted n	Weighted %	95% CL
<b>Feelings about becoming pregnant</b>			
Wanted to become pregnant sooner/then	43410	88.0	85.7 , 90.2
Wanted to become pregnant later or never	16962	77.3	72.4 , 82.2
All respondents	60372	84.7	82.5 , 86.9

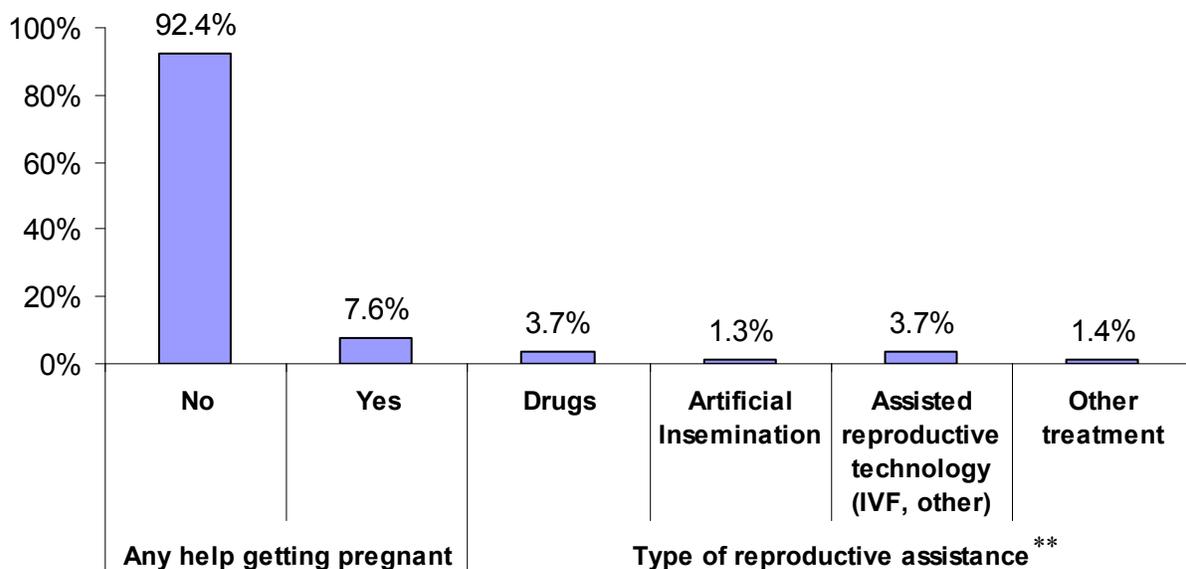
## PRE-PREGNANCY

### Fertility treatment

An estimated 7% of women of reproductive age may face infertility (Stephen, 2006). A variety of technologies are now available to address infertility. However, population estimates of births attributable to reproductive technologies have yet to be made.

Among all mothers, 7.6% reported receiving some form of assistance from a health care provider in becoming pregnant. Fertility drugs were used in 3.7% of pregnancies, as was assisted reproductive technology (such as in vitro fertilization). Artificial insemination and other forms of treatment were each used in about 1% of pregnancies.

**Figure 8. Prevalence of fertility treatment use\*, 2007 MA PRAMS**



\*Figure based on population prevalence of reproductive therapies.

\*\*Types of fertility treatment are not mutually exclusive.

## PRE-PREGNANCY

### Fertility treatment

The highest prevalence of reproductive assistance was observed among mothers aged 40 or older (29.6%). Higher rates of fertility treatment were also observed among White, non-Hispanic (8.7%), and Other, non-Hispanic (8.4%) mothers, college-educated (11.2%), and those who were living above the poverty level (9.4%).

**Table 5. Prevalence of fertility treatment use, by socio-demographic characteristics, 2007 MA PRAMS**

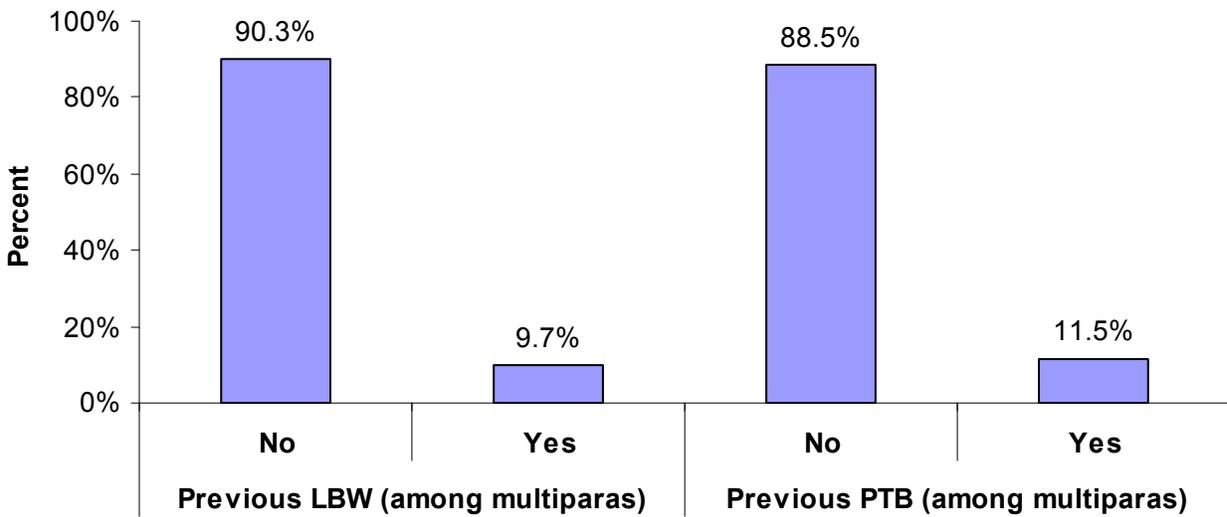
Characteristic	Weighted n	Weighted %	95% CL
<b>Maternal race/ethnicity</b>			
White, non-Hispanic	4409	8.7	6.1 , 11.3
Black, non-Hispanic	176	2.9	1.1 , 4.7
Hispanic	536	5.0	2.9 , 7.1
Other, non-Hispanic	606	8.4	5.5 , 11.2
<b>Maternal age (years)</b>			
<20	0	0.0	0.0 , 0.0
20-29	811	2.7	1.2 , 4.2
30-39	3933	10.8	7.7 , 13.9
40+	983	29.6	13.7 , 45.5
<b>Maternal education</b>			
<High school	172	2.1	0.4 , 3.8
High school diploma	885	4.4	1.7 , 7.2
Some college	846	6.7	2.5 , 10.9
College graduate	3822	11.2	7.9 , 14.4
<b>Household poverty level</b>			
>100% FPL	5007	9.4	7.0 , 11.9
≤ 100% FPL	194	1.3	0.4 , 2.2
<b>Maternal nativity</b>			
Non-US born	1409	6.0	3.8 , 8.2
US born	4318	8.4	5.9 , 10.8

## PRE-PREGNANCY

### Previous birth outcomes

Among multiparous mothers, (those who have previously given birth to a live infant) 9.7% reported having had a previous low birth weight (LBW) baby, and 11.5% reported having had a previous preterm birth (PTB).

**Figure 9. Prevalence of previous low birth weight and preterm births among multiparous mothers, 2007 MA PRAMS**



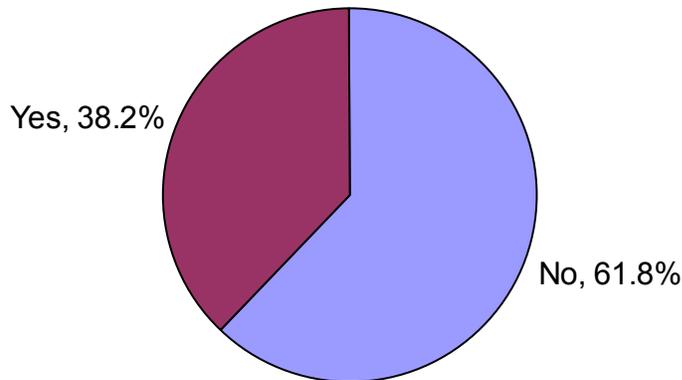
## PREGNANCY

### **WIC participation during pregnancy**

The Special Supplemental Nutrition Program for Women Infants and Children (WIC) provides low-income women with a variety of essential supportive services during pregnancy and until their children turn 5 years old. WIC provides supplemental food packages to families, as well as nutritional counseling, breastfeeding support, and referrals to medical and social services.

Over 38% of respondents reported participating in WIC during their most recent pregnancy (Figure 10).

**Figure 10. Proportion of mothers participating in WIC during pregnancy, 2007  
MA PRAMS**



## PREGNANCY

### WIC participation during pregnancy

The highest rates of WIC participation were among Hispanic mothers (79.3%), those with less than a high school education (84.5%), under 20 years of age (87.5%), living at or below the poverty level (85.7%), and unmarried (78.4%) (Table 6).

**Table 6. Prevalence of WIC participation during pregnancy, by socio-demographic characteristics, 2007 MA PRAMS**

Characteristic	Weighted n	Weighted %	95% CL
<b>Maternal race/ethnicity</b>			
White, non-Hispanic	12855	25.7	21.3 , 30.1
Black, non-Hispanic	4286	70.3	65.4 , 75.3
Hispanic	8133	79.3	75.2 , 83.3
Other, non-Hispanic	2773	39.3	34.0 , 44.6
<b>Maternal age (years)</b>			
<20	4418	87.5	78.9 , 96.2
20-29	16214	54.2	48.8 , 59.7
30-39	6833	19.4	16.0 , 22.8
40+	582	17.5	7.2 , 27.9
<b>Maternal education</b>			
<High school	6701	84.5	77.0 , 92.1
High school diploma	12517	64.5	57.4 , 71.5
Some college	5623	45.6	37.8 , 53.3
College graduate	3207	9.5	6.7 , 12.2
<b>Household poverty level</b>			
>100% FPL	11368	21.6	18.3 , 24.8
≤ 100% FPL	12637	85.7	80.6 , 90.7
<b>Maternal nativity</b>			
Non-US born	12567	55.2	50.6 , 59.7
US born	15480	30.5	26.5 , 34.6
<b>Marital status</b>			
Married	8344	17.3	14.5 , 20.0
Unmarried	19703	78.4	73.5 , 83.2

# PREGNANCY

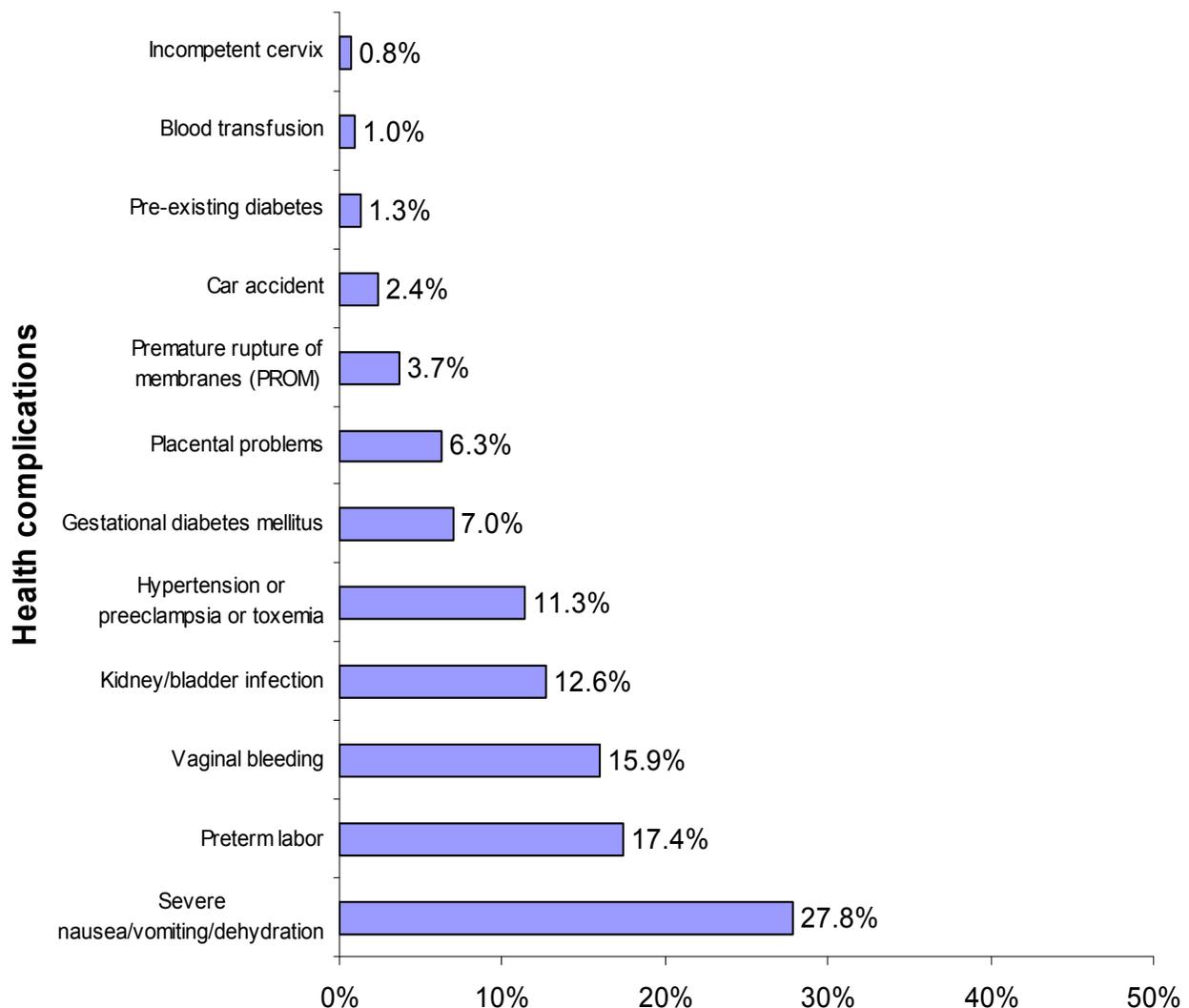
## Health complications during pregnancy

A number of health complications can arise during pregnancy, from milder conditions needing little or no medical intervention to more severe complications leading to hospitalization prior to birth.

The most commonly reported health complications of pregnancy were severe nausea and/or dehydration (27.8%) followed by preterm labor (17.4%) and vaginal bleeding (15.9%) (Figure 11). See Table 7. for details on gestational diabetes mellitus.

Among those reporting health complications, over 10% reported being hospitalized during their pregnancy and 29.3% reported being put on bed rest for more than 2 days (data not shown).

**Figure 11. Maternal health complications during pregnancy, 2007 MA PRAMS**



## PREGNANCY

### Gestational diabetes

Gestational diabetes mellitus (GDM) is defined as glucose intolerance which did not exist immediately prior to the pregnancy, but was diagnosed during pregnancy (Kjos, 1999). GDM can cause health complications for infants, including macrosomia (high birth weight) and increased risk of childhood obesity and adult diabetes. Delivery may be complicated by having a larger baby, leading to greater likelihood of cesarean delivery or injury to the child during birth. Mothers with GDM may be at increased risk of type-2 diabetes later in life (Metzger, 2007).

As seen in Figure 11, the overall prevalence of reported GDM was 7%. However, the prevalence of reports of gestational diabetes differed by each of race/ethnicity, education, age, and pre-pregnancy BMI. No significant difference was observed by poverty level. The highest rates of GDM were reported among Other, non-Hispanic mothers (12.5%), those with a college degree (9.4%), those age 40 or older (16.1%), and those who were obese (BMI  $\geq 30.0$ ) right before becoming pregnant (12.5%).

**Table 7. Prevalence of gestational diabetes, by socio-demographic characteristics, 2007 MA PRAMS**

Characteristic	Weighted n	Weighted %	95% CL
<b>Maternal race/ethnicity</b>			
White, non-Hispanic	3067	6.2	3.9 , 8.5
Black, non-Hispanic	496	8.2	5.2 , 11.2
Hispanic	675	6.9	4.3 , 9.4
Other, non-Hispanic	852	12.5	9.0 , 16.0
<b>Maternal age (years)</b>			
<20	262	5.4	0.0 , 11.8
20-29	1440	4.9	2.7 , 7.2
30-39	2860	8.2	5.7 , 10.7
40+	527	16.1	3.8 , 28.4
<b>Maternal education</b>			
<High school	518	6.9	2.2 , 11.6
High school diploma	567	3.0	1.1 , 4.9
Some college	857	7.0	3.5 , 10.5
College graduate	3147	9.4	6.4 , 12.3
<b>Household poverty level</b>			
>100% FPL	3625	6.9	4.9 , 8.9
$\leq 100\%$ FPL	888	6.3	3.5 , 9.1
<b>Maternal nativity</b>			
Non-US-born	2121	9.6	7.1 , 12.2
US-born	2968	5.9	3.8 , 8.0
<b>Body Mass Index (BMI)</b>			
Underweight	205	6.4	0.0 , 13.5
Normal	2249	5.6	3.6 , 7.6
Overweight	1287	8.2	4.3 , 12.0
Obese	1206	12.5	6.2 , 18.8

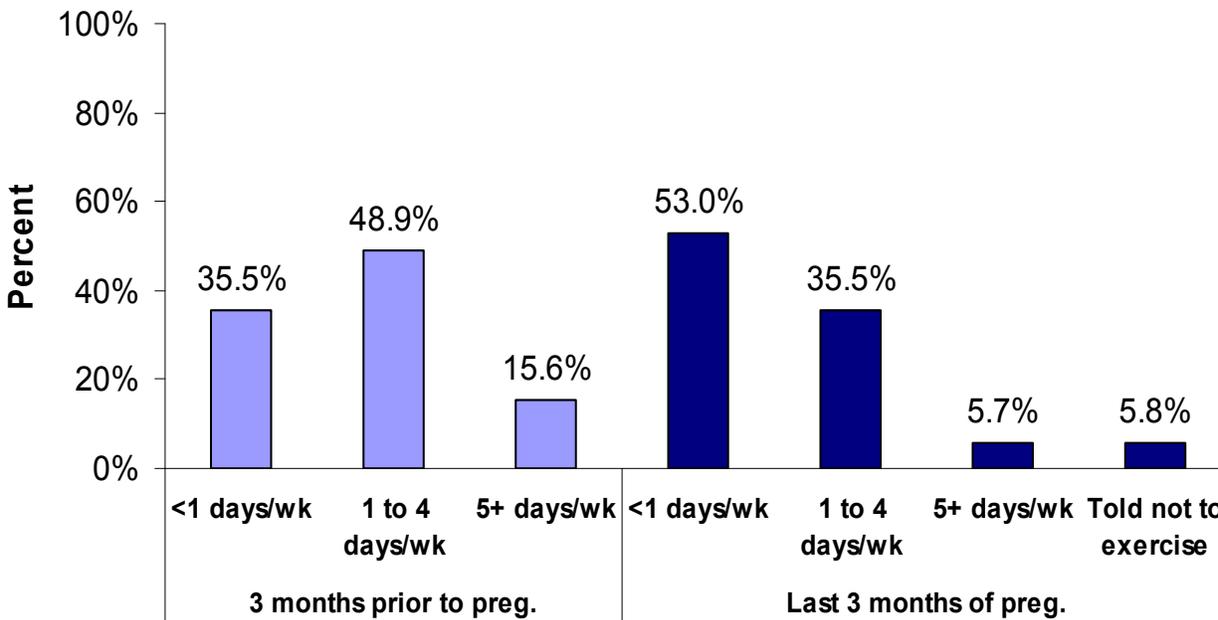
## PREGNANCY

### Exercise and diet

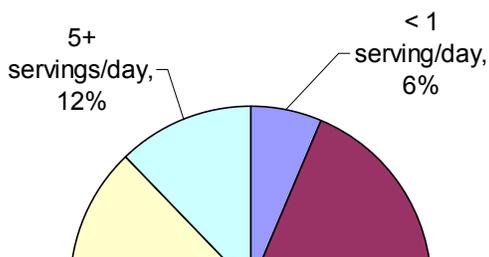
Appropriate exercise is key to maintaining good health during pregnancy and beyond. Unless advised otherwise, healthy women can maintain a regular schedule of exercise during their pregnancies (ACOG, 2009).

The majority of women (64.5%) reported performing some type of exercise at least once a week prior to becoming pregnant. However, this proportion dropped by the last trimester of pregnancy, to about 40%. Almost 6% of mothers were told by a health care provider that they should not exercise at all during the last three months of pregnancy.

**Figure 12. Frequency of physical activity prior to and during pregnancy, 2007 MA PRAMS**



**Figure 13. Consumption of fruits/vegetables per day in the last three months of pregnancy, 2007 MA PRAMS**



Current recommendations state that pregnant women should eat at least 2½ cups of vegetables and 1½ to 2 cups of fruits per day (ACOG, 2008).

Almost 94% of mothers reported

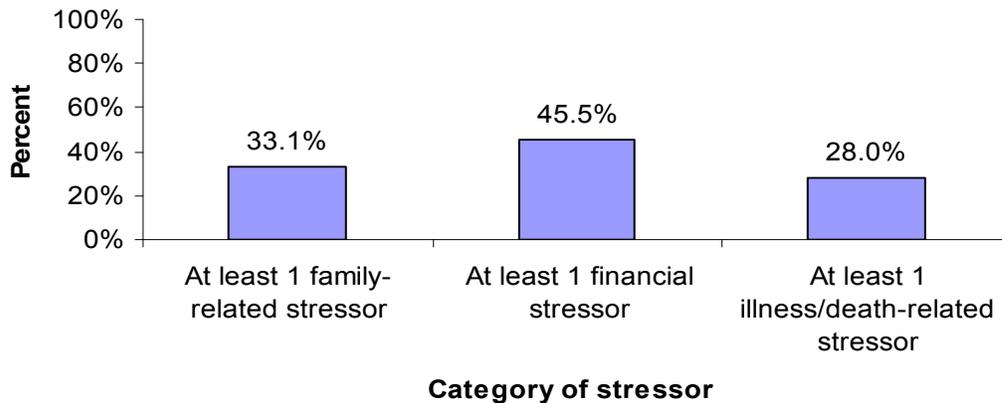
# PREGNANCY

## Stressful life events

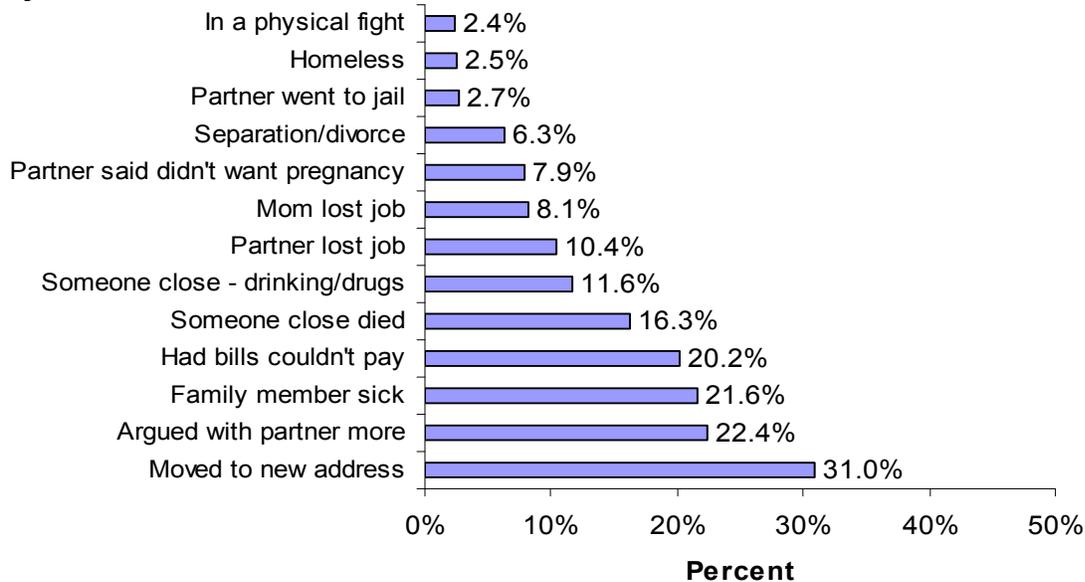
The perinatal period can be a stressful time in the lives of mothers and their families. A high proportion of MA PRAMS respondents reported experiencing at least one type of family-related (33.1%), financial (45.5%) or illness/death-related (28.0%) stressor during the year before their babies were born\* (Figure 15).

The most common stressful life event women experienced was moving to a new address (31.0%). Many women (22.4%) also reported increased arguing with their partners during this time (Figure 15).

**Figure 14. Prevalence of stressful life events in the 12 months before birth, by type, 2007 MA PRAMS**



**Figure 15. Prevalence of stressful life events in the 12 months before birth, by event, 2007 MA PRAMS**



\*Family-related stressors: Separation/divorce, physical fight, partner said didn't want pregnancy, argued with partner more than usual, someone close had a problem with drinking/drugs, partner went to jail; Financial stressors: Moving to a new address, being homeless, mom lost job, partner lost job, had bills couldn't pay; Illness/death-related stressors: Family member sick/had to go to hospital, someone close died.

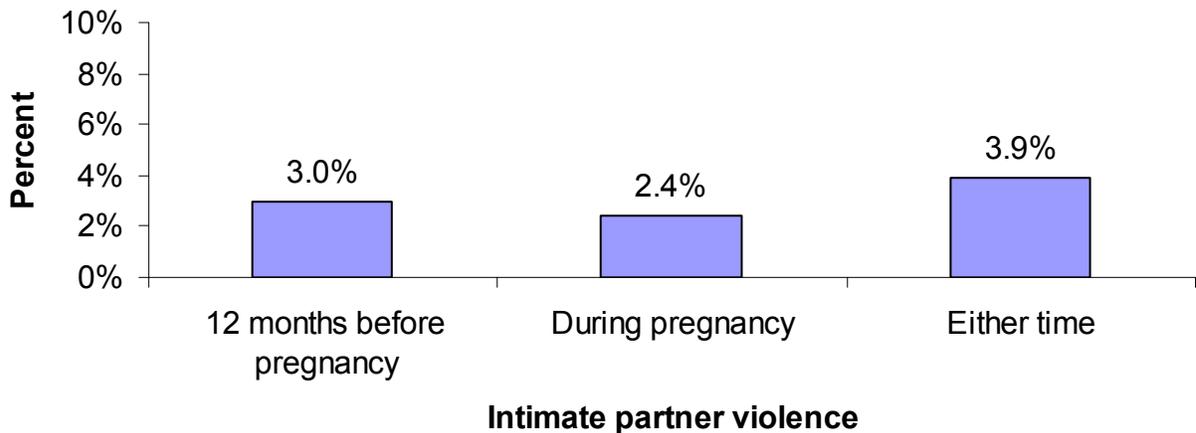
# PREGNANCY

## Physical abuse

Intimate partner violence (IPV) is a public health problem of great importance in the United States. It is estimated that one out of four women will experience IPV in her lifetime, and pregnant women may be at higher risk for IPV than non-pregnant women (Tjaden, 2000; Gelles, 1998). Homicide is the leading cause of death among pregnant women in the United States (Chang, 2005). Abuse among pregnant women may lead to pregnancy complications including vaginal bleeding and infection, and outcomes such as preterm delivery and low birth weight infants (Janssen, 2003; McFarlane, 1996).

A small percentage of PRAMS respondents reported experiencing physical abuse from an intimate partner in the 12 months before (3.0%) or during (2.4%) pregnancy. However, these percentages may underestimate the true prevalence of IPV due to underreporting.

**Figure 16. Prevalence of intimate partner violence in 12 months before pregnancy, during pregnancy, and at either time period, 2007 MA PRAMS**



Differences in the reported prevalence of abuse are most notable by race/ethnicity and poverty level. The prevalence of abuse either before or during pregnancy was more than 4 times greater among Hispanic mothers compared with White, non-Hispanic mothers (8.0% vs. 1.8%), and over 3 times greater among mothers living in poverty compared with those not in poverty (8.9% vs. 2.4%) (Table 8).

## PREGNANCY

**Table 8. Prevalence of intimate partner violence (before pregnancy, during pregnancy, and during either time period), 2007 MA PRAMS**

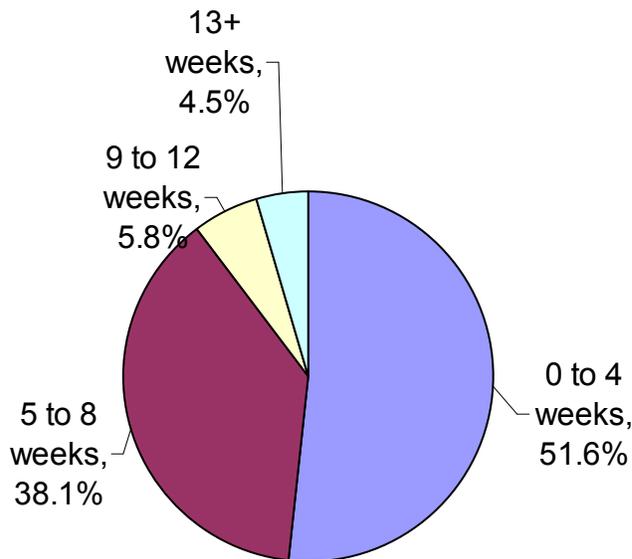
Characteristic	Abuse in 12 months before pregnancy			Abuse during pregnancy			Abuse in 12 months before or during pregnancy		
	Weighted n	%	95% CL	Weighted n	%	95% CL	Weighted n	%	95% CL
<b>Maternal race/ethnicity</b>									
White, non-Hispanic	914	1.8	0.5, 3.1	804	1.6	0.4, 2.9	1150	2.3	0.8, 3.8
Black, non-Hispanic	319	5.4	2.8, 7.9	296	5.0	2.6, 7.5	421	7.2	4.2, 10.1
Hispanic	807	8.0	5.2, 10.8	529	5.3	3.0, 7.7	1075	10.8	7.6, 14.0
Other, non-Hispanic	146	2.1	0.5, 3.6	118	1.7	0.4, 3.0	193	2.7	1.0, 4.5
<b>Maternal age (years)</b>									
<20	139	2.8	0.4, 5.3	155	3.2	0.6, 5.8	270	5.6	2.0, 9.1
20-29	1326	4.5	2.6, 6.3	949	3.2	1.5, 4.9	1636	5.5	3.5, 7.6
30-39	612	1.7	0.5, 3.0	643	1.8	0.5, 3.1	823	2.3	0.9, 3.8
40+	110	3.4	0.0, 9.8	0	0.0	0.0, 0.0	110	3.4	0.0, 9.8
<b>Maternal education</b>									
<High school	420	5.3	1.0, 9.6	301	3.9	0.0, 8.0	504	6.5	2.0, 11.0
High school diploma	661	3.4	1.5, 5.3	554	2.9	1.0, 4.7	875	4.5	2.4, 6.6
Some college	495	4.0	1.6, 6.5	380	3.1	0.8, 5.4	690	5.7	2.5, 8.8
College graduate	611	1.8	0.5, 3.2	512	1.5	0.3, 2.7	770	2.3	0.8, 3.8
<b>Household poverty level</b>									
>100% FPL	1014	1.9	0.9, 2.9	807	1.5	0.6, 2.4	1255	2.4	1.3, 3.5
≤100% FPL	896	6.1	3.0, 9.1	754	5.1	2.2, 8.1	1306	8.9	5.3, 12.5
<b>Maternal nativity</b>									
Non-US-born	835	3.7	2.1, 5.2	648	2.9	1.4, 4.3	1032	4.6	2.9, 6.3
US-born	1352	2.7	1.3, 4.1	1098	2.2	1.0, 3.4	1807	3.6	2.1, 5.1

# PREGNANCY

## Prenatal care: Entry to care

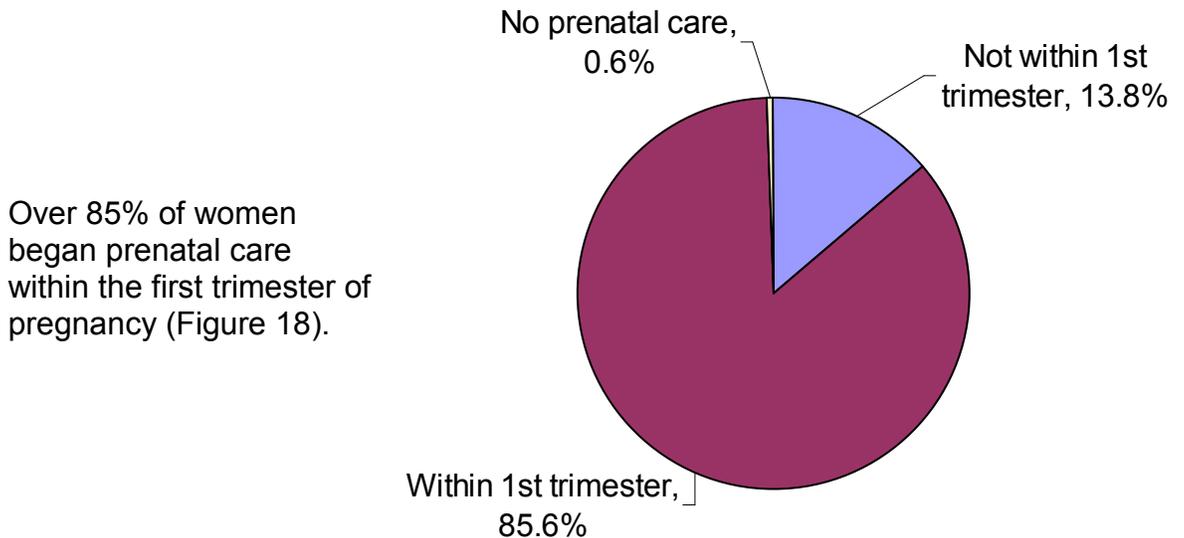
Early knowledge of pregnancy and timely entry into prenatal care provide women with access to important preventive health services as well as screening, monitoring and treatment for pregnancy-related health issues. Complications like GDM and hypertension can cause harm to the mother and fetus if left untreated.

**Figure 17. Weeks pregnant when sure of pregnancy, 2007 MA PRAMS**



More than half of women were aware of their pregnancies within the first month, and less than 5% were unaware of the pregnancy until after the first trimester (Figure 17).

**Figure 18. Timing of entry to prenatal care (within first trimester), 2007 MA PRAMS**



Over 85% of women began prenatal care within the first trimester of pregnancy (Figure 18).

## PREGNANCY

### Prenatal care: Entry to prenatal care

While Massachusetts mothers demonstrated high levels of timely prenatal care utilization overall, substantial differences were evident across socio-demographic groups.

Beginning care during the first trimester was lowest among Black, non-Hispanic mothers (72.4%), mothers under age 20 (62.3%), lowest educated mothers (68.9%), and those living at or below the poverty level (71.5%). Those for whom Medicaid was a source of prenatal care payment were also less likely to enter care in the first trimester (76.1%) (Table 9).

**Table 9. Prevalence of entry to prenatal care in the first trimester, by socio-demographic characteristics, 2007 MA PRAMS**

Characteristic	Weighted n	Weighted %	95% CL
<b>Maternal race/ethnicity</b>			
White, non-Hispanic	45297	90.0	87.0 , 93.0
Black, non-Hispanic	4278	72.4	67.4 , 77.5
Hispanic	7742	75.7	71.3 , 80.1
Other, non-Hispanic	5538	79.0	74.5 , 83.5
<b>Maternal age (years)</b>			
<20	3126	62.3	49.6 , 75.1
20-29	24920	84.4	80.9 , 87.8
30-39	32067	89.8	86.9 , 92.6
40+	2742	86.5	76.5 , 96.6
<b>Maternal education</b>			
<High school	5436	68.9	60.0 , 77.8
High school diploma	15365	78.5	73.2 , 83.8
Some college	10785	88.3	83.7 , 93.0
College graduate	31270	92.6	90.1 , 95.0
<b>Household poverty level</b>			
>100% FPL	47493	90.4	88.1 , 92.7
≤ 100% FPL	10244	71.5	65.3 , 77.7
<b>Maternal nativity</b>			
Non-US-born	18458	81.4	78.1 , 84.7
US-born	44398	87.4	84.5 , 90.3
<b>Source of prenatal care payment</b>			
Non-Medicaid	43299	91.6	89.2 , 93.9
Medicaid	19197	76.1	71.6 , 80.7

### **Massachusetts mothers say...**

*“Please try your best to get prenatal care as soon as you know that you are pregnant. You and your baby [need] it.”*

# PREGNANCY

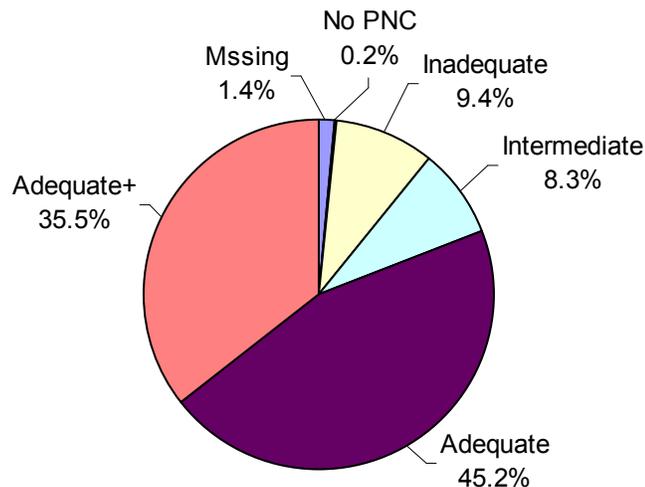
## Prenatal care: Adequacy of Prenatal Care Utilization Index

The Adequacy of Prenatal Care Utilization (APNCU) Index describes several aspects of prenatal care, including the timing of entry to care and the volume of care received. Prenatal care classified as “Adequate” started early in the pregnancy and involved the expected number of prenatal care visits given the duration of the pregnancy. Less than adequate care generally involves late entry to care and/or an insufficient number of visits.

Overall, more than 80% received prenatal care deemed either “adequate” or “adequate+” (Figure 19).

(See Appendix D. for full description of the APNCU Index.)

**Figure 19. Adequacy of prenatal care (as measured by Adequacy of Prenatal Care Utilization Index, APNCU), 2007 MA PRAMS**



## PREGNANCY

### Prenatal care: Adequacy of prenatal care utilization index (APNCU)

Adequacy of care differed across groups, with inadequate or no care particularly prevalent among those with less than a high school education (34.7%), mothers under 20 years of age (19.9%), as well as among Black, non-Hispanic mothers (14.7%), and those living at or below the poverty level (18.3%) or on Medicaid (16.0%) (Table 10).

**Table 10. Prevalence of inadequate/no prenatal care, as measured by the Adequacy of Prenatal Care Utilization (APNCU) Index, by socio-demographic characteristics, 2007 MA PRAMS**

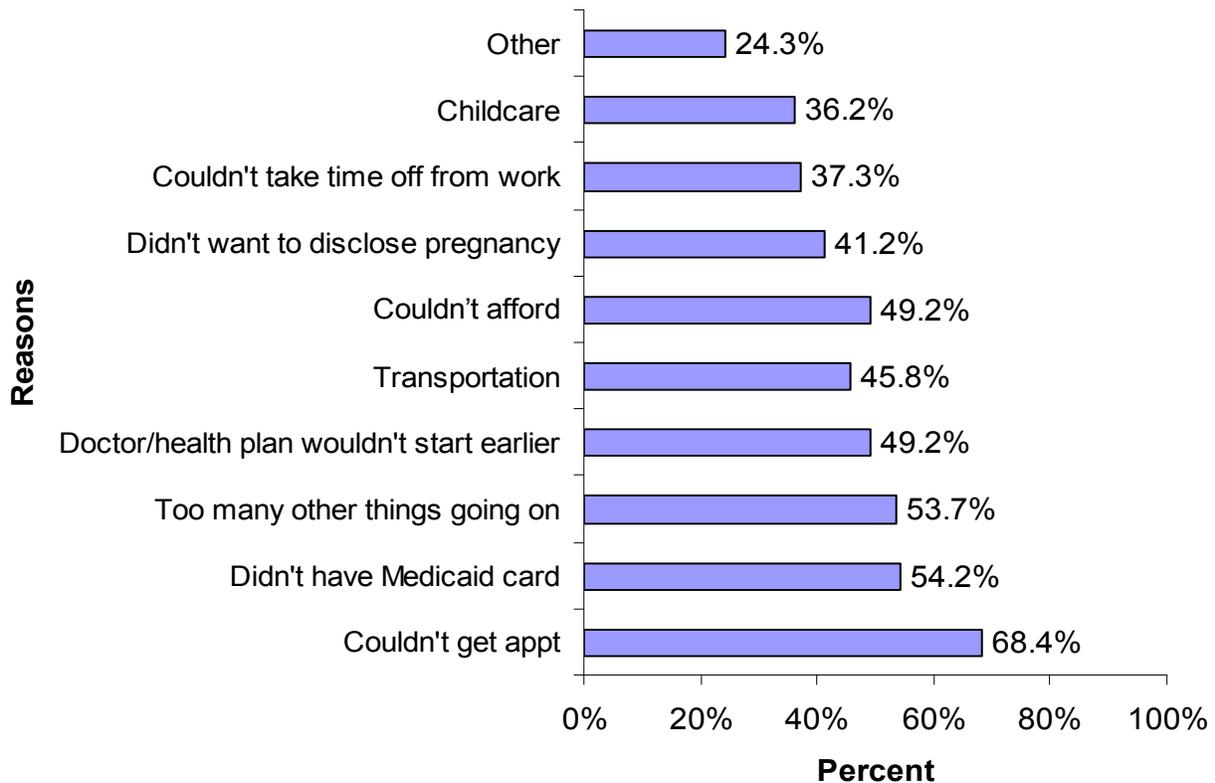
Characteristic	Weighted n	Weighted %	95% CL
<b>Maternal race/ethnicity</b>			
White, non-Hispanic	3989	7.8	5.2 , 10.5
Black, non-Hispanic	901	14.7	10.8 , 18.7
Hispanic	1357	12.7	9.3 , 16.1
Other, non-Hispanic	917	12.6	9.0 , 16.3
<b>Maternal age (years)</b>			
<20	1772	19.9	12.0 , 27.9
20-29	2908	13.4	9.0 , 17.8
30-39	2253	5.8	2.8 , 8.8
40+	232	6.2	3.8 , 8.6
<b>Maternal education</b>			
<High school	1632	34.7	21.2 , 48.1
High school diploma	2673	9.6	6.7 , 12.5
Some college	733	6.2	4.2 , 8.2
College graduate	2126	7.0	0.0 , 14.0
<b>Household poverty level</b>			
>100% FPL	3558	6.7	4.7 , 8.7
≤ 100% FPL	2705	18.3	12.7 , 23.9
<b>Maternal nativity</b>			
Non-US-born	3013	12.8	9.7 , 15.9
US-born	4152	8.1	5.6 , 10.5
<b>Prenatal care payer source</b>			
Non-Medicaid	2906	6.0	4.0 , 8.0
Medicaid	4118	16.0	11.9 , 20.0

# PREGNANCY

## Prenatal care: Reasons for delay

Over 10% of respondents reported not receiving prenatal care as soon as they had wanted. Among those not receiving care as early as desired, reasons related to the healthcare system were most often cited. Not being able to get an appointment sooner was the most common reason for not receiving timely care (68.4%) and not having a Medicaid card was the second most common cause of delay (54.2%) (Figure 20).

**Figure 20. Reasons\* for not receiving prenatal care as early as wanted, 2007 MA PRAMS**



*\*Reasons for not receiving prenatal care as early as wanted are not mutually exclusive.*

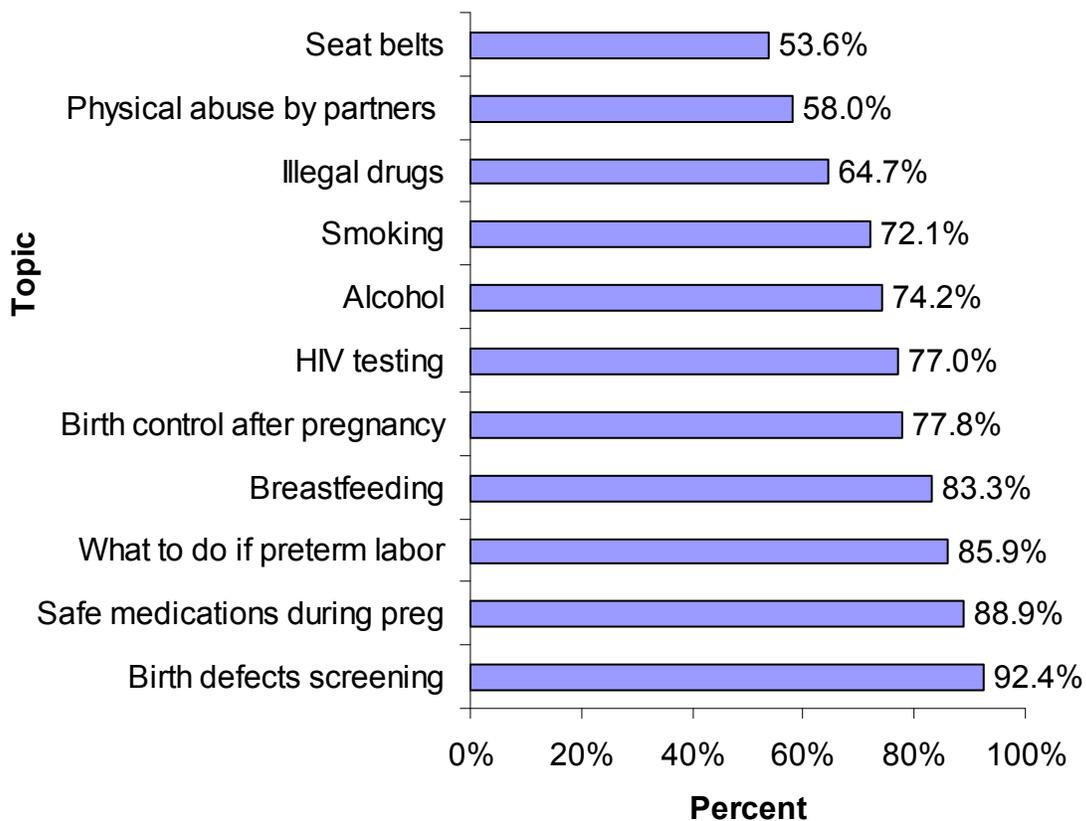
## PREGNANCY

### Prenatal care: Topics discussed with health care providers

Mothers reported discussing certain health topics with their health care providers more often than others (Figure 21). Most frequently discussed topics included birth defects screening (92.4%) and safe medications to use during pregnancy (88.9%). Least frequently discussed were physical abuse by partners (58.0%) and seat belt use (53.6%).

Notably, topics discussed with health care providers are not necessarily in order of public health importance. For instance, the estimated population prevalence of physical abuse by a partner during pregnancy from MA PRAMS, 2007 is similar to the prevalence of major birth defects (about 3% in MA in 2008) (NBDPN, 2009). However, physical abuse was reported to be far less frequently discussed compared to birth defects screening.

**Figure 21. Topics discussed with health care providers during prenatal care visits, 2007 MA PRAMS**



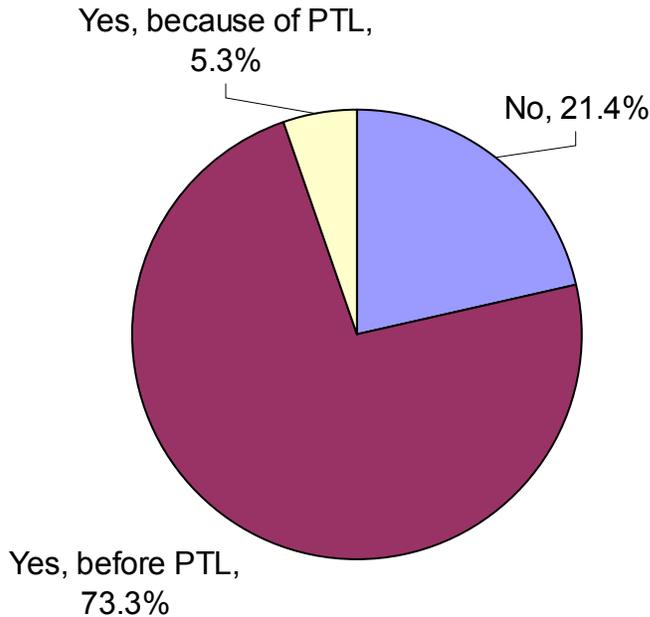
## PREGNANCY

### **Prenatal care: Discussing preterm labor (PTL)**

Recognizing the signs of preterm labor is critical for obtaining treatment to delay delivery. All pregnant women should be informed so that they can recognize the signs of preterm labor and know what to do if it occurs.

Health care providers discussed the signs and symptoms of preterm labor with about 73% of mothers before labor began, and about 5% because they were in preterm labor. Over 21% of women reported that preterm labor was not discussed at all.

**Figure 22. Discussion of the signs of preterm labor (PTL) with health care providers, 2007 MA PRAMS**



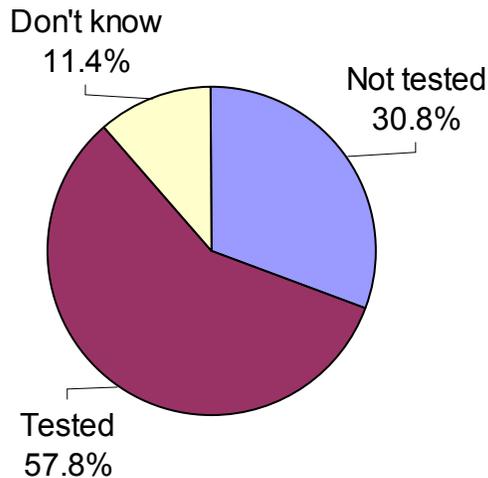
# PREGNANCY

## HIV testing during pregnancy: Testing and offer of testing

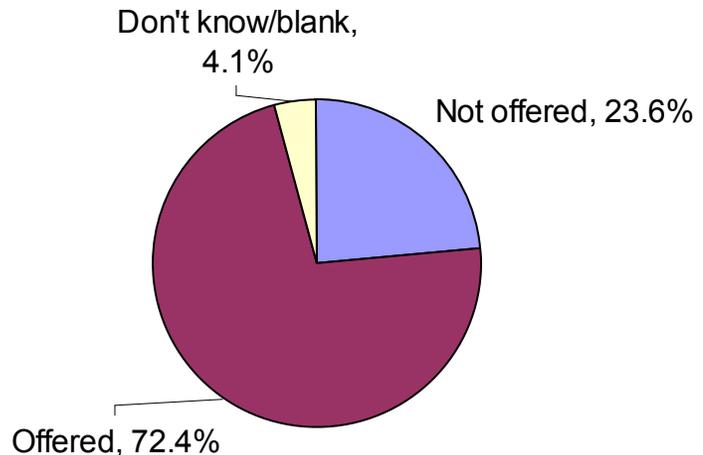
It is recommended that pregnant women have the opportunity to know their HIV status. Anti-retroviral treatment for HIV-positive women during pregnancy can drastically reduce the chances of transmission to the fetus during pregnancy and delivery (Branson, 2006).

Almost 58% of mothers reporting having received an HIV test during their pregnancy, 30.8% reported not being tested, and another 11.4% reported not knowing whether they had been tested (Figure 23). Overall, about 72% of mothers reported that they were offered an HIV test during pregnancy (Figure 24).

**Figure 23. Proportion of women tested for HIV during pregnancy, 2007 MA PRAMS**



**Figure 24. Proportion of women offered HIV testing during pregnancy, 2007 MA PRAMS**



## PREGNANCY

### HIV testing during pregnancy: Testing and offer of testing

HIV testing patterns varied across socio-demographic groups. Black, non-Hispanic (78.6%) and Hispanic (74.3%) mothers were more likely to be tested for HIV than White, non-Hispanic (51.1%) and Other, non-Hispanic (62.6%) mothers. Testing was also associated with age < 20 years (78.0%), less than high school education (71.0%), living in poverty (72.8%) and being non-US-born (66.0%).

Report of being *offered* an HIV test also differed across groups. Black, non-Hispanic and Hispanic mothers (88.5% and 82.8%, respectively) were more likely to report being offered an HIV test than White, non-Hispanic and Other, non-Hispanic mothers (68.1% and 73.3%, respectively). Mothers under age 20 (88.6%), with less than a high school education (83.3%), living at or below the poverty level (80.9%) and non-US-born (76.0%) were more likely than other groups to report being offered an HIV test (Table 11).

**Table 11. Prevalence of HIV testing/offer-of-testing during pregnancy, by socio-demographic characteristics, 2007 MA PRAMS**

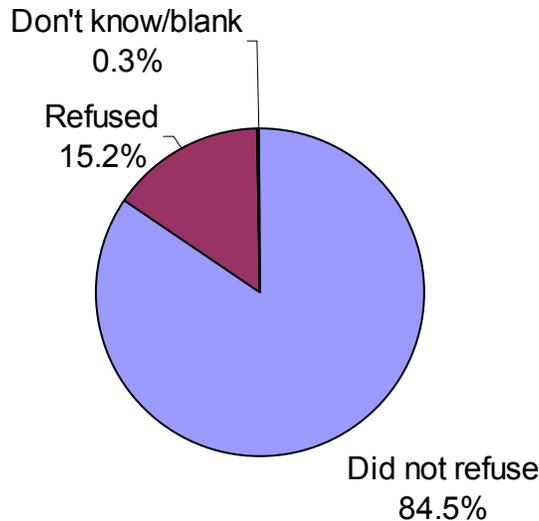
Characteristic	Tested for HIV			Offered HIV test		
	Weighted n	Weighted %	95% CL	Weighted n	Weighted %	95% CL
<b>Maternal race/ethnicity</b>						
White, non-Hispanic	26014	51.1	46.2 , 55.9	34672	68.1	63.6 , 72.5
Black, non-Hispanic	4808	78.6	74.2 , 83.1	5412	88.5	85.0 , 92.0
Hispanic	7953	74.3	69.9 , 78.6	8862	82.8	79.0 , 86.5
Other, non-Hispanic	4547	62.6	57.6 , 67.6	5325	73.3	68.7 , 77.9
<b>Maternal age (years)</b>						
<20	3986	78.0	67.7 , 88.4	4529	88.6	81.6 , 95.6
20-29	19156	63.4	58.0 , 68.7	22739	75.2	70.3 , 80.1
30-39	18652	51.3	46.4 , 56.2	24577	67.6	63.0 , 72.3
40+	1528	46.1	29.6 , 62.5	2426	73.2	58.3 , 88.0
<b>Maternal education</b>						
<High school	5814	71.0	62.3 , 79.6	6821	83.3	77.0 , 89.5
High school diploma	13910	69.7	63.1 , 76.3	16281	81.6	76.0 , 87.2
Some college	7311	58.0	50.1 , 65.9	9113	72.3	64.9 , 79.7
College graduate	16287	47.6	42.5 , 52.7	22056	64.4	59.4 , 69.4
<b>Household poverty level</b>						
>100% FPL	27960	52.5	48.3 , 56.7	37066	69.6	65.7 , 73.6
≤ 100% FPL	10741	72.8	66.3 , 79.3	11940	80.9	75.1 , 86.8
<b>Maternal nativity</b>						
Non-US-born	15473	66.0	61.4 , 70.5	17838	76.0	71.8 , 80.3
US-born	27849	54.0	49.5 , 58.5	36433	70.7	66.6 , 74.8

## PREGNANCY

### HIV testing during pregnancy: Refusal

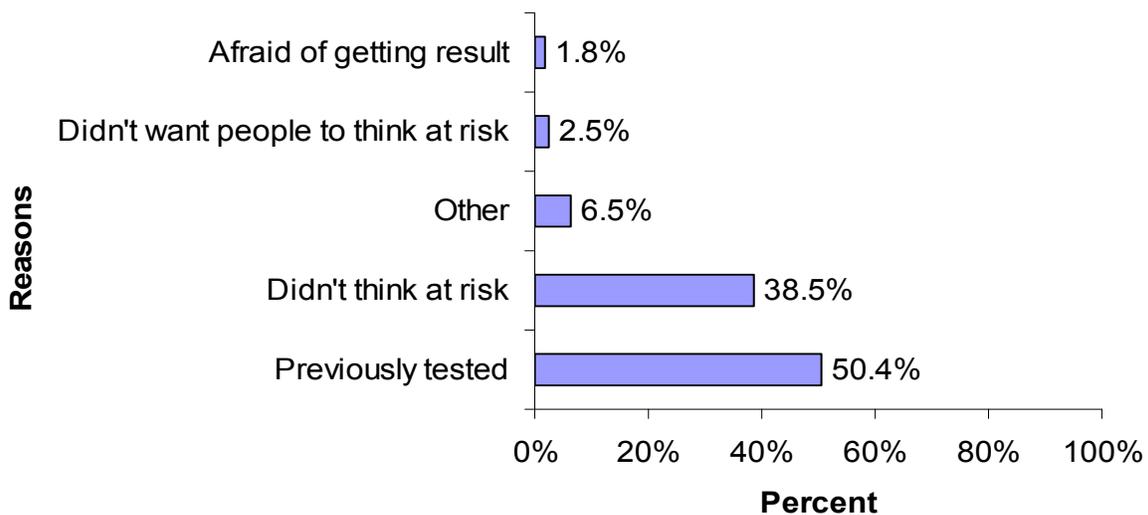
Among mothers who were *offered* an HIV test during their pregnancy, over 15% of mothers indicated that they had refused the test (Figure 25).

**Figure 25. Proportion of women who refused HIV testing during pregnancy (among those offered), 2007 MA PRAMS**



Among those refusing an HIV test, the most common reasons included having been previously tested (50.4%), and not believing oneself to be at risk for HIV (38.5%) (Figure 26).

**Figure 26. Reasons\* for refusing HIV testing during pregnancy, 2007 MA PRAMS**



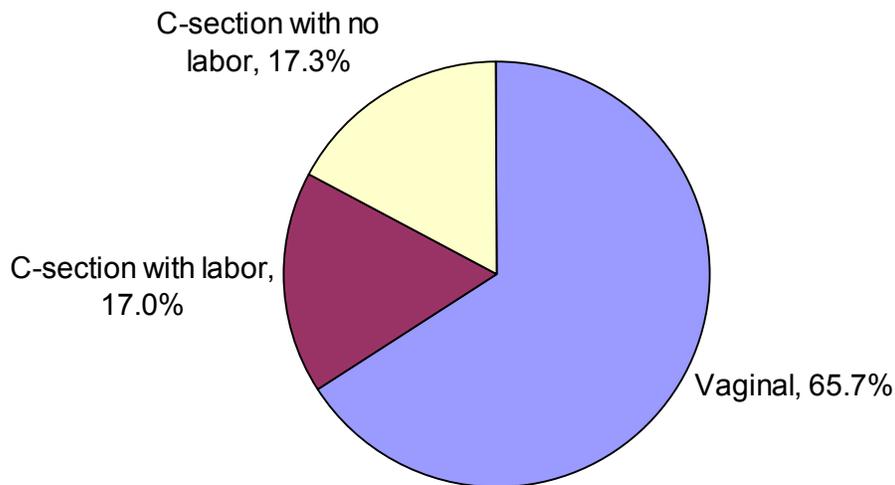
\*Reasons for refusing HIV testing during pregnancy are not mutually exclusive.

# PREGNANCY

## Method of delivery

Massachusetts PRAMS data reflect the national trend of an increasing proportion of births occurring by cesarean delivery (c-section), a birth where the baby is delivered through an incision in the abdomen. Among PRAMS respondents, over 34% reported that they had delivered by c-section. Of these, about half were planned c-sections (those performed before the onset of labor), while the other half were initiated after labor had already begun (Figure 27).

**Figure 27. Proportion of births by vaginal and cesarean delivery, 2007 MA PRAMS**



### **Massachusetts mothers say...**

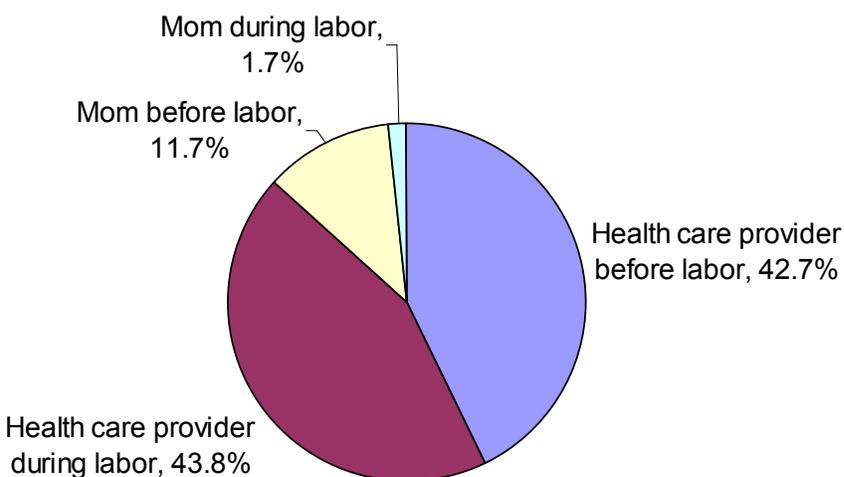
*"I think doctors are [too] quick to recommend c-sections. My doctor wanted me to have a c-section and I refused. My baby was born vaginally a few hours later without any complications. This experience has changed my perspective on hospital births and I might consider a home birth next time."*

## PREGNANCY

### Cesarean delivery request

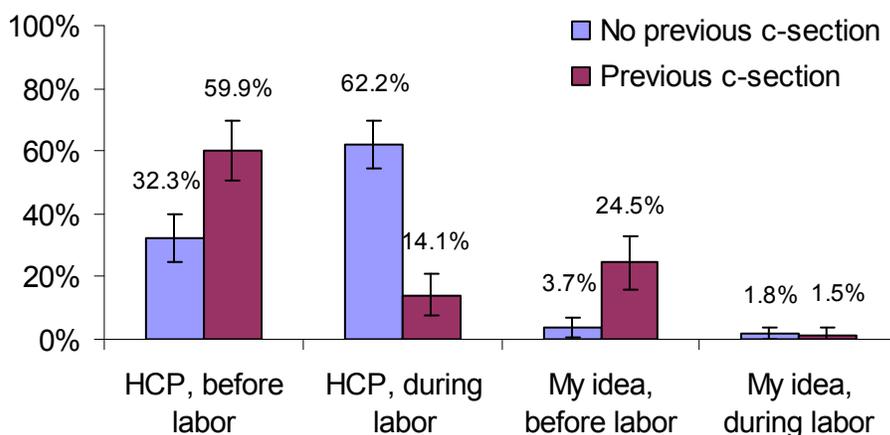
The Massachusetts PRAMS survey asks mothers to report on who made the decision for a c-section and when (i.e. before or during labor). Among those who delivered by c-section, over 86% reported that it was the decision of a health care provider (HCP) to perform the c-section, either before or during labor. Almost 12% of women who had a c-section reported that it was their idea to have a c-section before labor, and 1.7% said it was their decision during labor (Figure 28).

**Figure 28. Source of cesarean delivery request, among women delivered by cesarean section, 2007 MA PRAMS**



When examined by prior c-section history, very few women with no prior c-section reported that they (as opposed to the HCP) requested a cesarean delivery before labor (3.7%), whereas almost 25% of those with a prior c-section said that it was their idea before labor began (Figure 29).

**Figure 29. Source of cesarean delivery request, by prior-birth history, 2007 MA PRAMS**

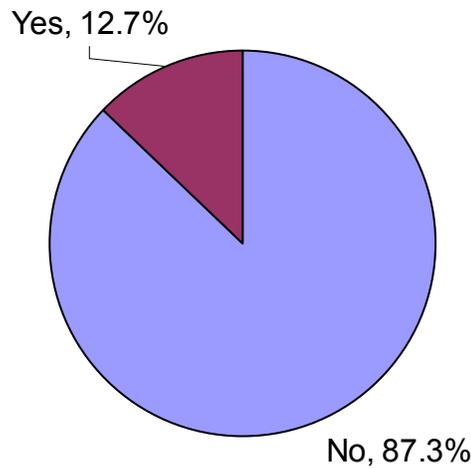


## PREGNANCY

### Infant birth hospitalization

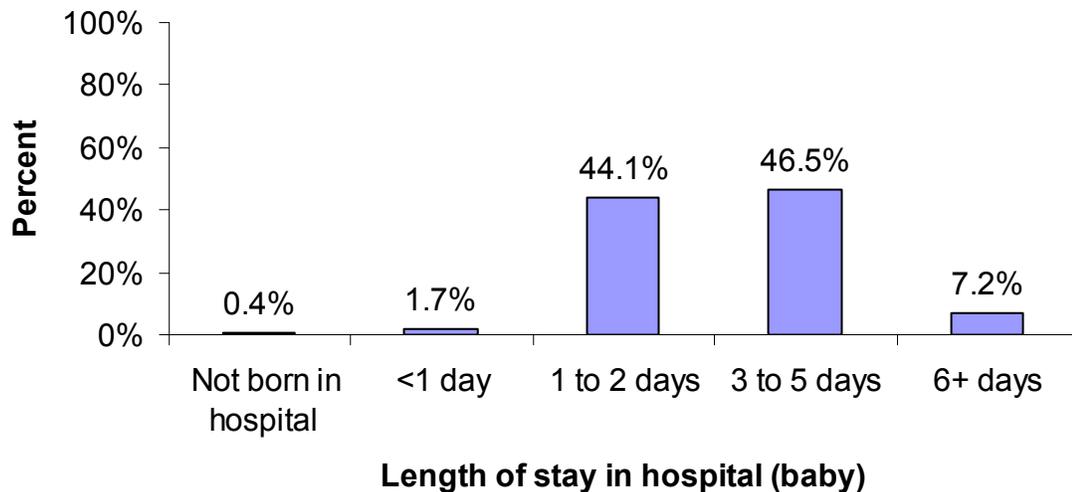
Almost 13% of mothers reported that their babies spent time in a neonatal intensive care unit (NICU) (Figure 30).

**Figure 30. Proportion of infants staying in the neonatal intensive care unit, 2007 MA PRAMS**



Approximately 44% of infants were reported to have stayed in the hospital for 1 to 2 days, and 47% for 3 to 5 days. A reported 7.2% of infants stayed in for 6 or more days (Figure 31).

**Figure 31. Infant length of hospital stay at birth, 2007 MA PRAMS**

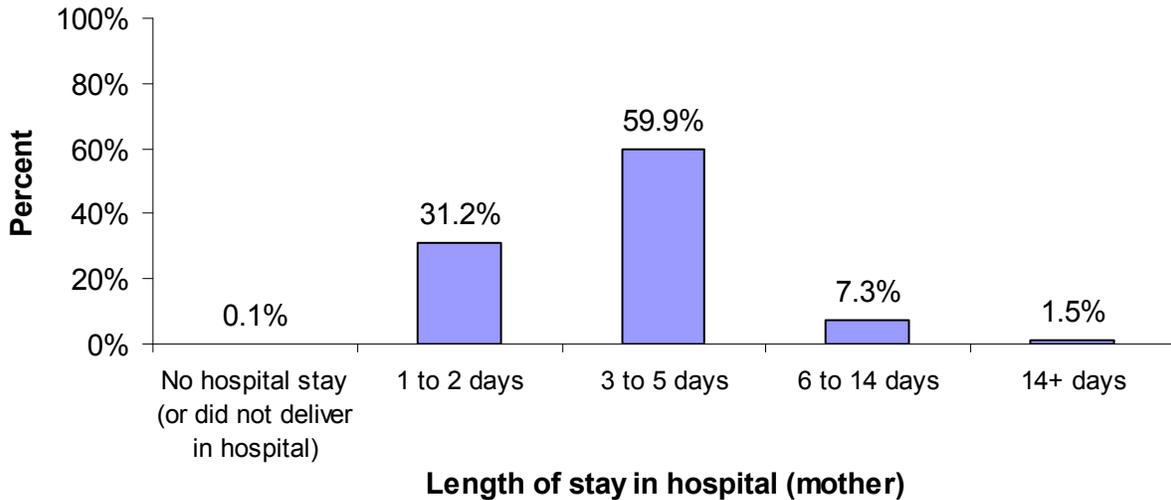


## PREGNANCY

### Maternal delivery hospitalization

About a third of mothers reported staying in the hospital 1-2 days after their delivery and almost 60% of mothers reported staying in the hospital for 3 to 5 days. Fewer (about 9%) reported staying in the hospital for 6 days or more (Figure 32).

**Figure 32. Maternal length of hospital stay for delivery, 2007 MA PRAMS**



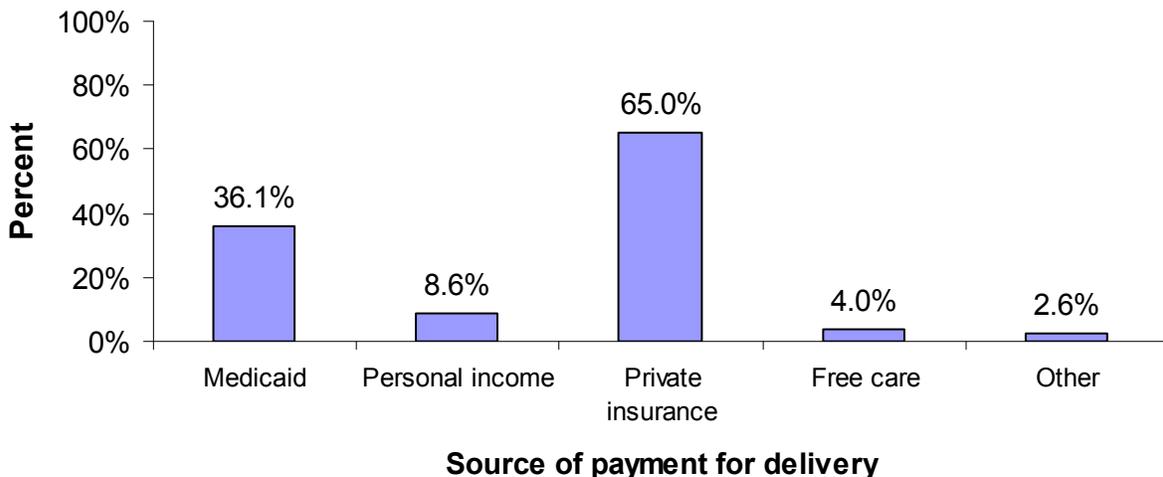
*Massachusetts mothers say...*

*“Even though I delivered vaginally, I felt I was not ready to leave the hospital two days after delivery. However, that is what the insurance company allows. I really think a new mother should be allowed to stay in the hospital longer than two days.”*

### Delivery payer source

The majority of births were paid for by private health insurance. However, over a third were paid by Medicaid (Figure 33). (NOTE: Respondents could indicate more than one source of insurance.)

**Figure 33. Prevalence of delivery payment sources, 2007 MA PRAMS**

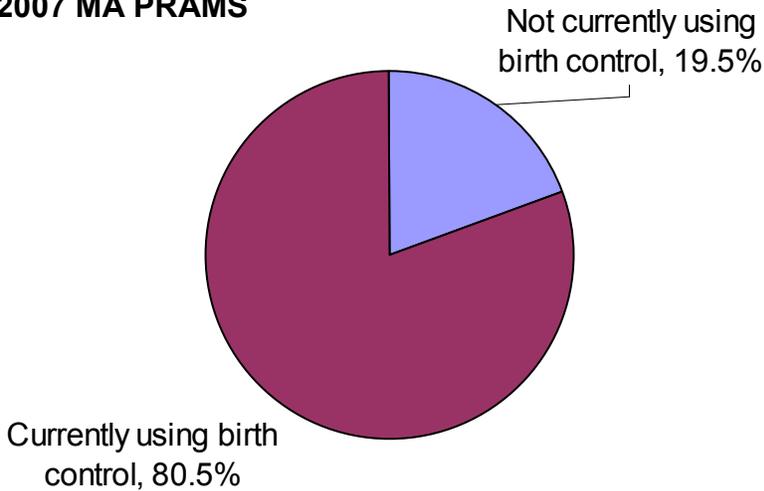


## POST-PARTUM

### Contraception use

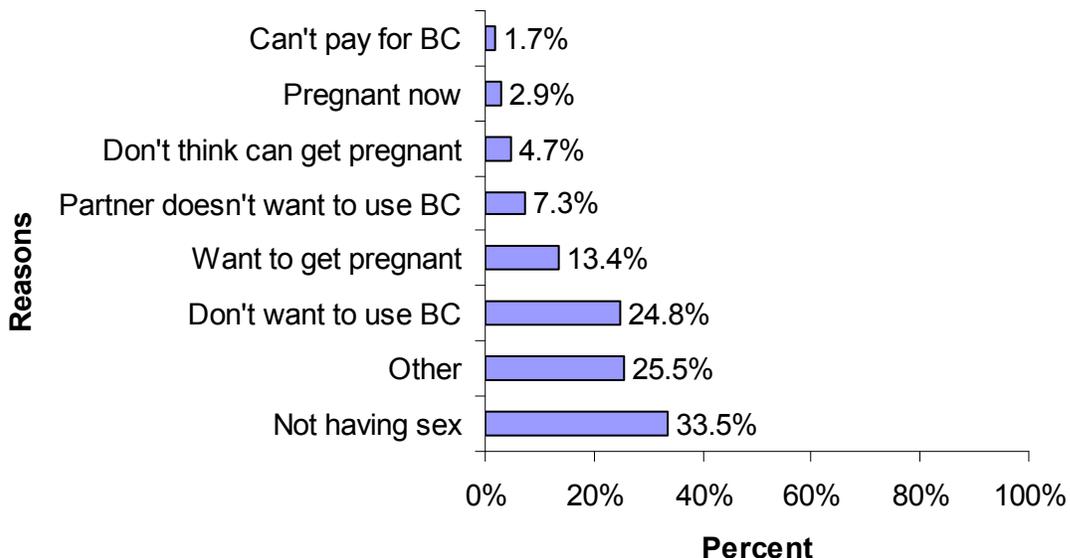
Adequate spacing of pregnancies is important for the health of both mothers and babies. Shorter inter-pregnancy intervals have been associated with adverse birth outcomes including preterm birth, low birth weight, small size for gestational age, neonatal and infant mortality (Conde-Agudelo, 2006). Over 80% of women reported using birth control post-partum.

**Figure 34. Proportion of women using contraception post-partum, 2007 MA PRAMS**



Among those not using birth control, the most common reasons for not doing so included not having sex (33.5%), not wanting to use birth control (24.8%), and wanting to become pregnant again (13.4%).

**Figure 35. Reasons for not using contraception post-partum (among those reporting no use), 2007 MA PRAMS**



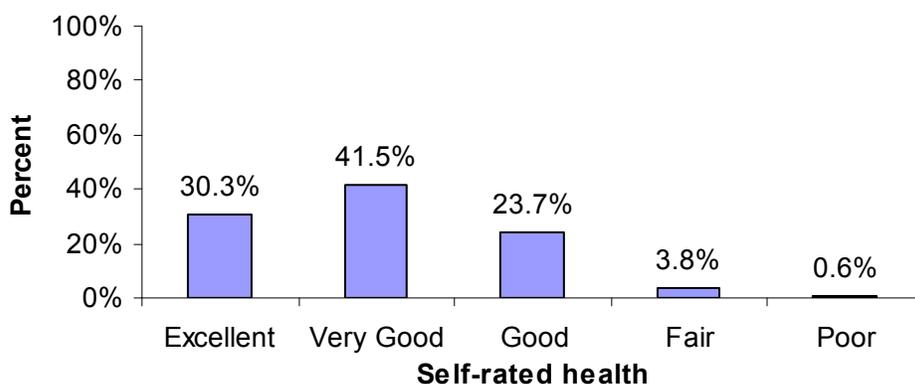
## POST-PARTUM

### Maternal self-rated health

Self-rated health has been suggested to be a valid predictor of morbidity and mortality in adults and a useful tool in assessing the overall well-being of populations (Singh-Manoux, 2006).

Most mothers, 71.8%, reported that their health was “very good” or “excellent,” and another 23.7% reported that their health was “good” (Figure 36). Overall, 4.4% reported their health to be fair or poor.

**Figure 36. Maternal self-rated health post-partum, 2007 MA PRAMS**



Fair/poor self-rated health was most prevalent among Hispanic mothers (11.8%), those with less than a high school education (13.8%), under age 20 years (12.3%), and living at or below the poverty level (13.1%) (Table 12).

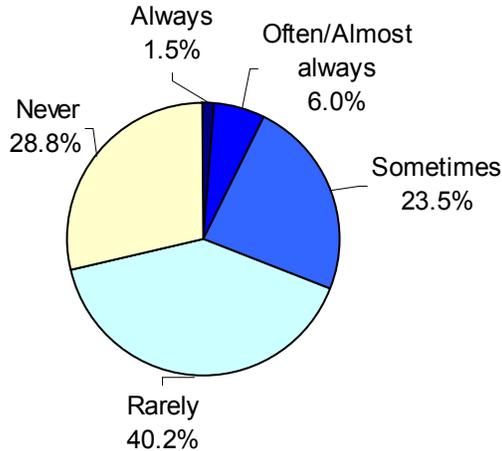
**Table 12. Prevalence of fair/poor self-rated health, by socio-demographic characteristics, 2007 MA PRAMS**

Characteristic	Weighted n	Weighted %	95% CL
<b>Maternal race/ethnicity</b>			
White, non-Hispanic	1457	2.9	1.1 , 4.6
Black, non-Hispanic	369	6.1	3.4 , 8.7
Hispanic	1255	11.8	8.5 , 15.0
Other, non-Hispanic	225	3.1	1.1 , 5.1
<b>Maternal age (years)</b>			
<20	630	12.3	3.8 , 20.9
20-29	1431	4.8	2.7 , 6.9
30-39	1154	3.2	1.6 , 4.7
40+	92	2.8	0.0 , 5.5
<b>Maternal education</b>			
<High school	1122	13.8	7.7 , 19.8
High school diploma	1453	7.4	3.8 , 11.0
Some college	417	3.3	1.2 , 5.4
College graduate	314	0.9	0.0 , 1.9
<b>Household poverty level</b>			
>100% FPL	668	1.3	0.5 , 2.0
≤100% FPL	1912	13.1	8.1 , 18.1
<b>Maternal nativity</b>			
Non-US-born	1711	7.3	5.0 , 9.7
US-born	1595	3.1	1.6 , 4.7

## POST-PARTUM

### Post-partum depressive symptoms: feelings of depression

**Figure 37. Frequency of feeling depressed post-partum, 2007 MA PRAMS**



Post-partum depression (PPD) can be a serious and debilitating condition for new mothers, affecting both maternal and infant health, and potentially interfering with infant development and mother-child bonding (Logsdon, 2006).

Feelings of being depressed, down or hopeless at least sometimes were prevalent among mothers overall, (31.0%) with 7.5% reporting having these feelings “often/almost always” or “always” (Figure 37).

The occurrence of feeling depressed often or always differed across groups, with higher prevalences observed among Black, non-Hispanics (10.6%), Hispanics (12.0%), those with a high school education or less, (<HS: 9.4%, HS: 10.1%), those under age 20 (17.7%), and those living in poverty (15.8%) (Table 13).

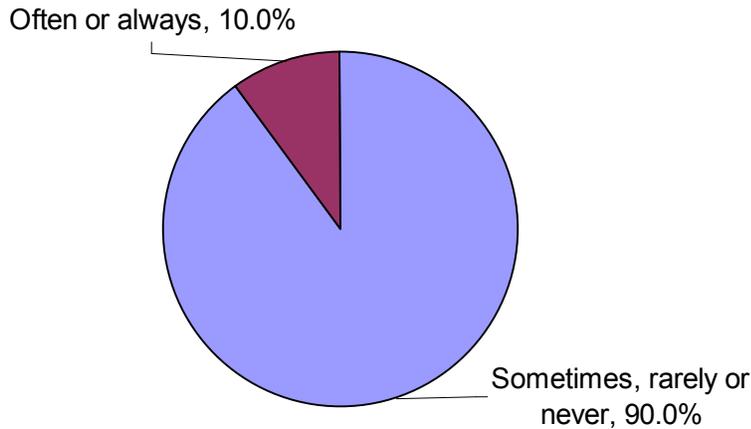
**Table 13. Prevalence of often or always feeling depressed post-partum, by socio-demographic characteristics, 2007 MA PRAMS**

Characteristic	Weighted n	Weighted %	95% CL
<b>Maternal race/ethnicity</b>			
White, non-Hispanic	3176	6.3	3.9 , 8.8
Black, non-Hispanic	626	10.6	7.1 , 14.2
Hispanic	1198	12.0	8.6 , 15.4
Other, non-Hispanic	485	7.1	4.3 , 9.9
<b>Maternal age (years)</b>			
<20	885	17.7	7.5 , 27.9
20-29	2337	7.9	5.2 , 10.7
30-39	2244	6.4	4.0 , 8.8
40+	18	0.6	0.0 , 1.6
<b>Maternal education</b>			
<High school	723	9.4	3.5 , 15.3
High school diploma	1955	10.1	5.9 , 14.3
Some college	878	7.3	4.1 , 10.5
College graduate	1928	5.7	3.3 , 8.1
<b>Household poverty level</b>			
>100% FPL	2954	5.6	3.7 , 7.4
≤100% FPL	2299	15.8	10.4 , 21.2
<b>Maternal nativity</b>			
Non-US-born	1802	8.1	5.6 , 10.6
US-born	3682	7.3	4.9 , 9.6

## POST-PARTUM

### Post-partum depressive symptoms: loss of interest or pleasure in activities

**Figure 38. Proportion of women often/always experiencing little interest in activities post-partum, 2007 MA PRAMS**



Measures of loss of interest or pleasure in daily activities have been used in assessing the presence of depression (Whooley, 1997).

PRAMS asks how often mothers have had “little interest or little pleasure in doing things” in the post-partum period.

Overall, 10% reported that they often or always experienced little pleasure or interest in their activities (Figure 38).

Other, non-Hispanic mothers (17.9%), those under age 20 (13.5%), those with some college education (16.2%), those living at or below the poverty level (16.8%), and non-US-born mothers (14.9%) were most likely to report a loss of pleasure or interest in activities.

**Table 14. Prevalence of often or always experiencing loss of interest/pleasure in doing things, by socio-demographic characteristics, 2007 MA PRAMS**

Characteristic	Weighted n	Weighted %	95% CL
<b>Maternal race/ethnicity</b>			
White, non-Hispanic	4105	8.2	5.5 , 11.0
Black, non-Hispanic	888	15.2	11.1 , 19.3
Hispanic	1062	10.6	7.4 , 13.7
Other, non-Hispanic	1223	17.9	13.8 , 22.1
<b>Maternal age (years)</b>			
<20	652	13.5	4.5 , 22.5
20-29	3615	12.4	8.8 , 16.0
30-39	2784	7.9	5.4 , 10.4
40+	229	7.0	0.0 , 14.1
<b>Maternal education</b>			
<High school	633	10.0	8.0 , 12.0
High school diploma	3148	8.5	4.9 , 12.1
Some college	1142	16.2	10.8 , 21.6
College graduate	2356	9.6	6.0 , 13.1
<b>Household poverty level</b>			
>100% FPL	4397	8.3	6.1 , 10.5
≤100% FPL	2426	16.8	11.4 , 22.1
<b>Maternal nativity</b>			
Non-US-born	3310	14.9	11.5 , 18.3
US-born	3969	7.9	5.4 , 10.4

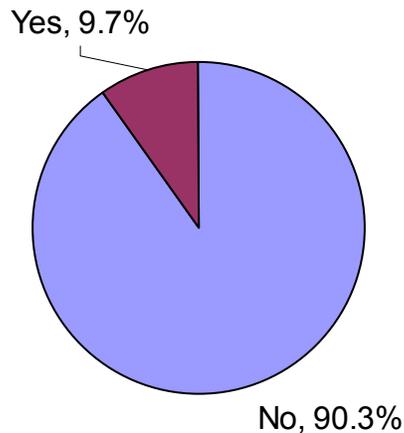
## POST-PARTUM

### Post-partum depression: help-seeking

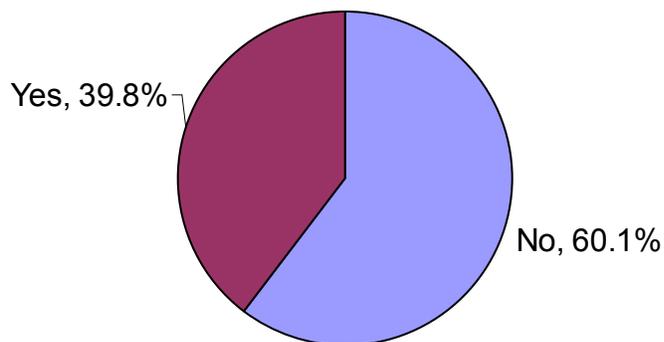
Overall, 9.7% of mothers reported seeking help for depression in the time since their babies had been born (Figure 39).

Among mothers indicating that they felt depressed often or always, about 40% reported that they had sought help for depression (Figure 40).

**Figure 39. Proportion of women seeking help for post-partum depression (among all mothers), 2007 MA PRAMS**



**Figure 40. Proportion of women seeking help for post-partum depression (only among those reporting often/always feeling depressed), 2007 MA PRAMS**



#### **Massachusetts mothers say...**

*"I had severe post-partum depression with my first child... Throughout my second pregnancy I was put on antidepressant medication which was tremendously [effective] in defeating any signs of PPD. Even though I was apprehensive about taking med during my pregnancy, it was clear in my case the pros far outweighed the cons."*

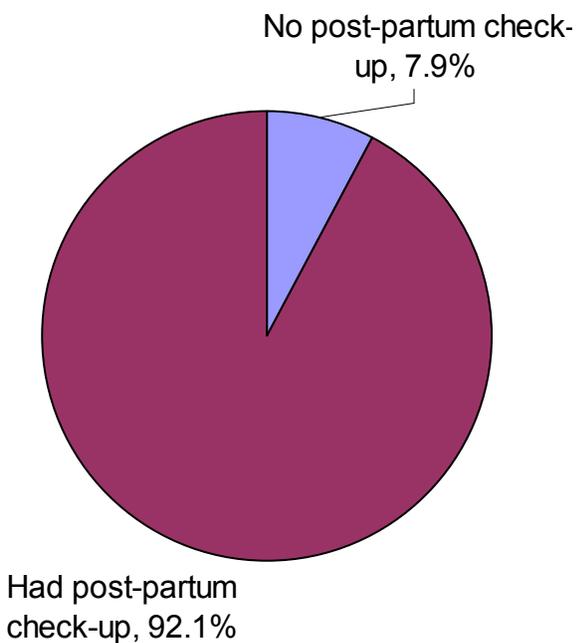
## POST-PARTUM

### Post-partum health care

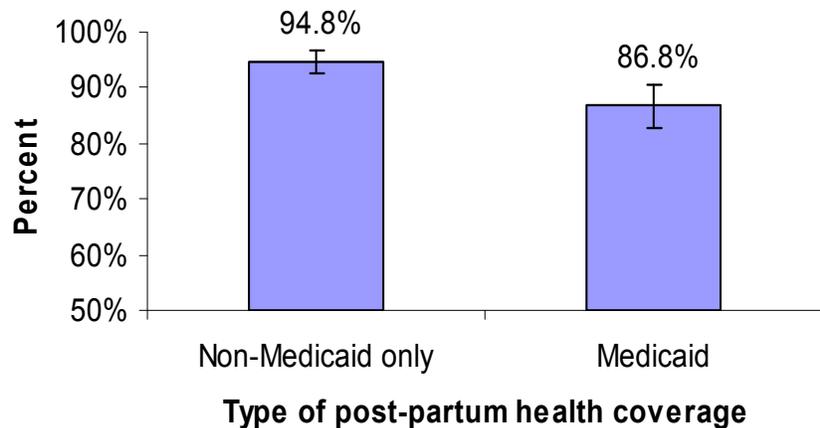
Most women, over 92%, had received a post-partum checkup at the time of the survey (Figure 41).

However, the prevalence of post-partum care differed by insurance status. All mothers reported a source of health insurance post-partum. Among those insured by Medicaid, 86.8% had received a post partum visit, compared with 94.8% of mothers who had a non-Medicaid source of insurance (Figure 42).

**Figure 41. Proportion of women receiving a post-partum checkup by the time of survey, 2007 MA PRAMS**



**Figure 42. Proportion of women receiving a post-partum checkup, by insurance type, 2007 MA PRAMS**

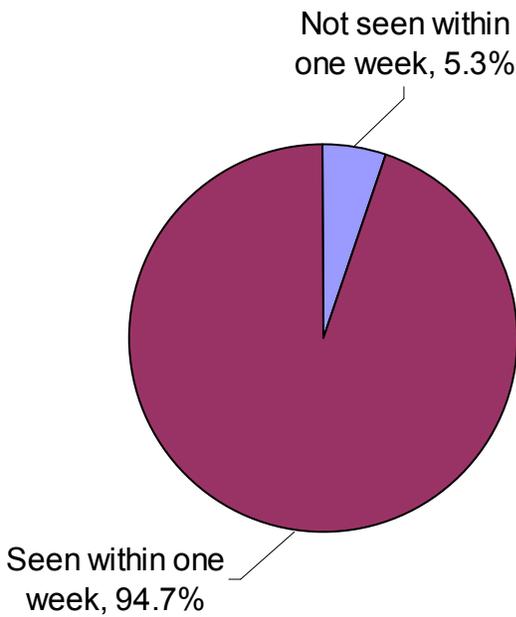


## POST-PARTUM

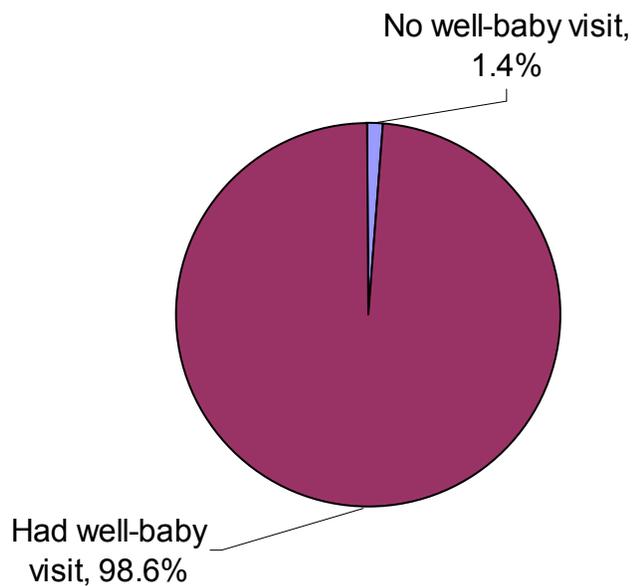
### Infant health care

Most infants, 94.7%, were reported to have been seen by a health care provider within one week of leaving the hospital (Figure 43), and 98.6% had had at least one well-baby care visit at the time of the survey (Figure 44).

**Figure 43. Proportion of infants seen by health care provider within one week of leaving birth hospital, 2007 MA PRAMS**



**Figure 44. Proportion of infants receiving a well-baby visit by the time of survey, 2007 MA PRAMS**

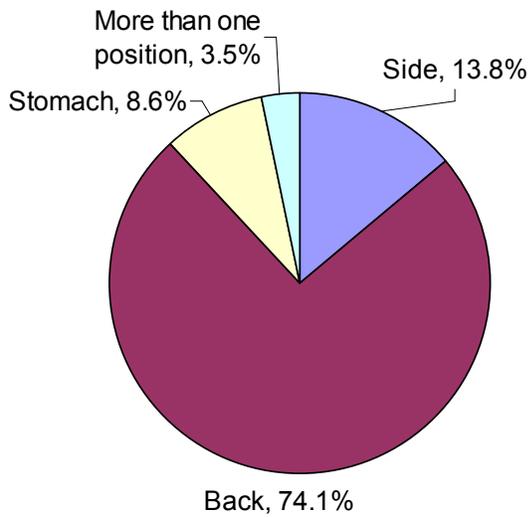


## POST-PARTUM

### Infant sleep position

Placing infants to sleep on their backs (supine position) has been associated with lowered risk of sudden infant death syndrome (SIDS), and the practice has been promoted widely to families (AAP, 1992).

**Figure 45. Prevalence of infant sleep positions, 2007 MA PRAMS**



The majority of PRAMS babies, 74.1%, were reported to be positioned on their backs for sleep (Figure 45).

Mothers who were White, non-Hispanic (79.7%), age 40 or older (83.7%), college educated (85.1%), non-poor (78.5%) and US-born (77.2%) were more likely than other groups to report putting their babies to bed on their backs (Table 15).

**Table 15 . Prevalence of placing infant to sleep on back, by socio-demographic characteristics, 2007 MA PRAMS**

Characteristic	Weighted n	Weighted %	95% CL
<b>Maternal race/ethnicity</b>			
White, non-Hispanic	39027	79.7	75.7 , 83.7
Black, non-Hispanic	3295	58.2	52.6 , 63.8
Hispanic	5507	56.3	51.1 , 61.4
Other, non-Hispanic	5010	73.3	68.4 , 78.2
<b>Maternal age (years)</b>			
<20	2746	57.0	43.9 , 70.1
20-29	20117	69.7	64.8 , 74.5
30-39	27232	79.4	75.4 , 83.4
40+	2744	83.7	73.4 , 94.0
<b>Maternal education</b>			
<High school	4021	54.3	44.2 , 64.4
High school diploma	13297	69.8	63.7 , 75.9
Some college	7489	63.0	55.2 , 70.8
College graduate	28033	85.1	81.6 , 88.7
<b>Household poverty level</b>			
>100% FPL	40955	78.5	75.2 , 81.9
≤ 100% FPL	8587	62.2	55.5 , 68.8
<b>Maternal nativity</b>			
Non-US-born	14633	67.1	62.9 , 71.4
US-born	38206	77.2	73.4 , 81.0

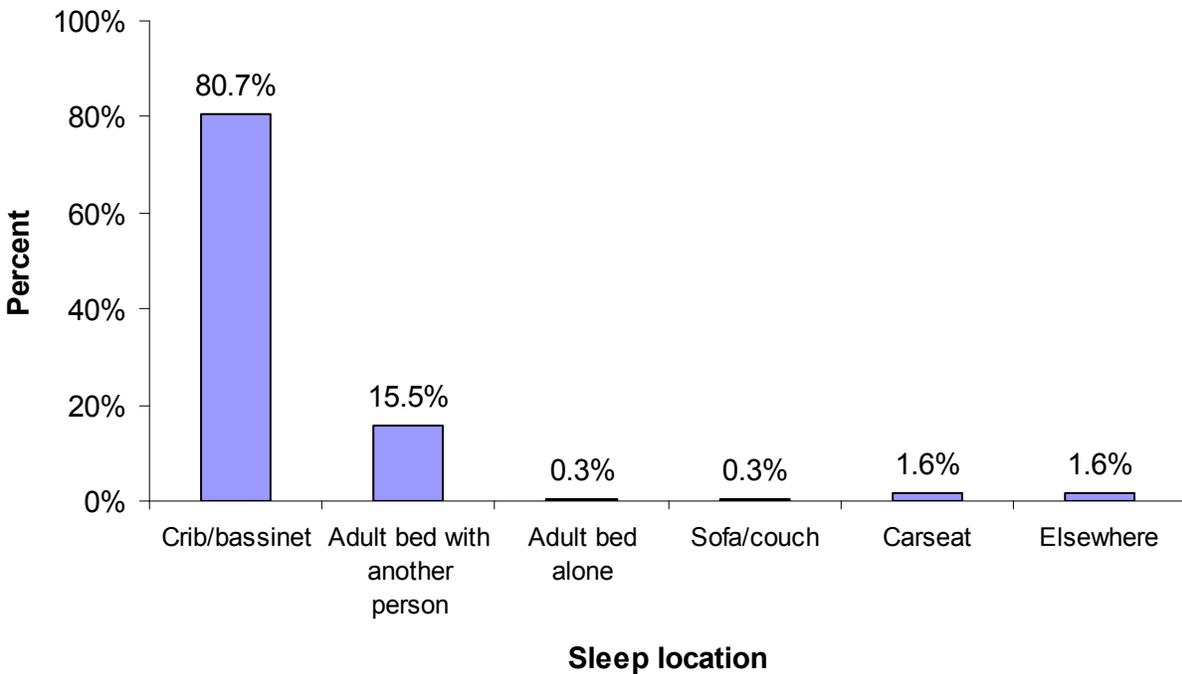
# POST-PARTUM

## Infant sleep location

The practice of “bed sharing” or infants sharing a bed with someone else, has been associated with some infant deaths (AAP, 1992). However, the evidence on the safety of bed-sharing is mixed, with some findings indicating that the risk is differential depending on parental use of substances such as tobacco, with some noting that the benefits of breastfeeding, facilitated by bedsharing, may outweigh the risks (Horsley, 2007).

Over 80% of babies were reported to be sleeping in a crib or bassinet. Over 15 % of babies shared an adult bed with at least one other person. Of note, children who were ever breastfed were more likely to share a bed than children who were never breastfed, (16% vs. 10%, not shown).

**Figure 46. Prevalence of infant sleep locations, 2007 MA PRAMS**



## POST-PARTUM

### Infant sleep location

The practice of bed-sharing differed widely by race/ethnicity, and was most commonly reported by Other, non-Hispanic (29.5%) and Black, non-Hispanic mothers (25.4%). Patterns by other demographic groups were less apparent (Table 16).

**Table 16. Prevalence of infant sleeping on an adult bed with other person(s), by socio-demographic characteristics, 2007 MA PRAMS**

Characteristic	Weighted n	Weighted %	95% CL
<b>Maternal race/ethnicity</b>			
White, non-Hispanic	6038	12.5	9.1 , 15.8
Black, non-Hispanic	1414	25.4	20.4 , 30.4
Hispanic	1530	15.7	11.8 , 19.5
Other, non-Hispanic	1958	29.5	24.6 , 34.5
<b>Maternal age (years)</b>			
<20	955	19.2	9.8 , 28.6
20-29	4923	17.2	13.0 , 21.3
30-39	4448	13.2	10.0 , 16.3
40+	614	19.5	7.4 , 31.6
<b>Maternal education</b>			
<High school	1124	15.1	9.3 , 20.9
High school diploma	3679	19.6	14.0 , 25.2
Some college	2196	18.7	12.5 , 24.9
College graduate	3941	12.1	9.0 , 15.3
<b>Household poverty level</b>			
>100% FPL	7614	14.8	11.9 , 17.7
≤ 100% FPL	2575	18.6	13.4 , 23.7
<b>Maternal nativity</b>			
Non-US-born	4164	19.6	15.9 , 23.2
US-born	6776	13.8	10.7 , 16.9

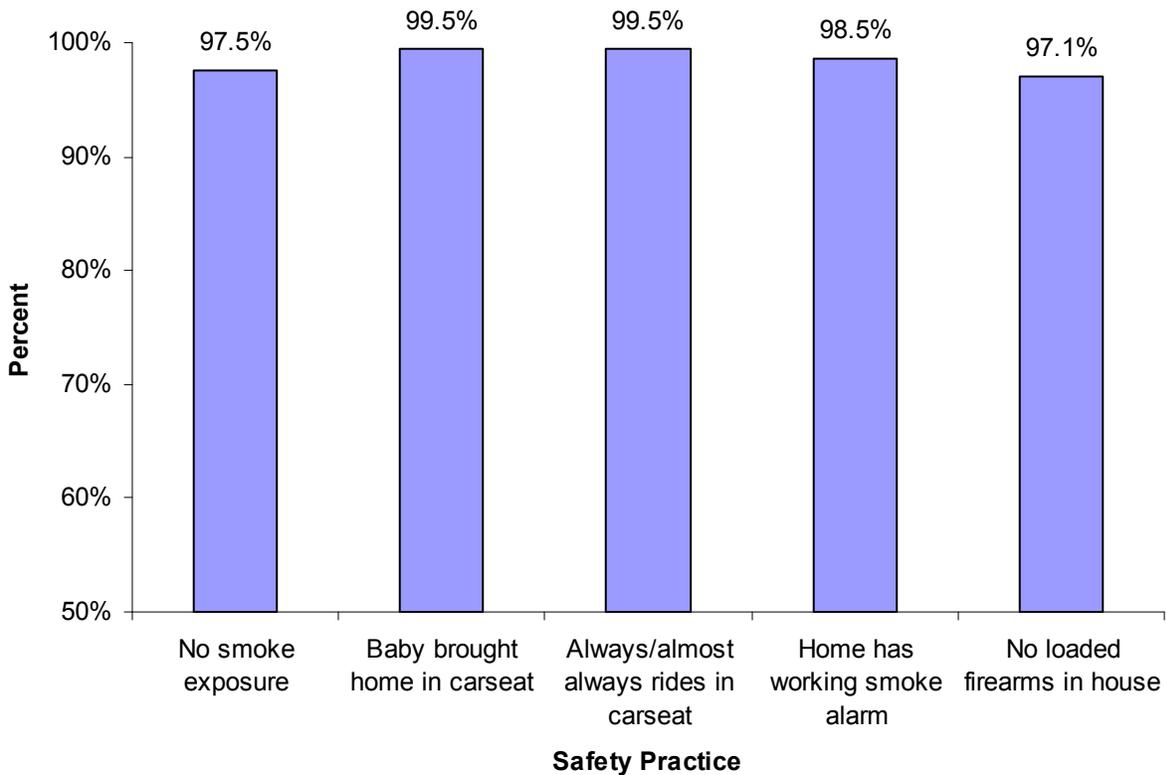
## POST-PARTUM

### Infant Safety

The vast majority of respondents reported taking appropriate safety measures around car travel, smoke exposure and smoke alarms, and firearms.

Almost all mothers reported that their infants were never exposed to second-hand smoke (97.5%), were brought home from the hospital in a car seat (99.5%) and always/almost always rode in one (99.5%), had a working smoke alarm in the home (98.5%), and did not keep loaded firearms in the home (97.1%) (Figure 47).

**Figure 47. Prevalence of infant safety practices, 2007 MA PRAMS**



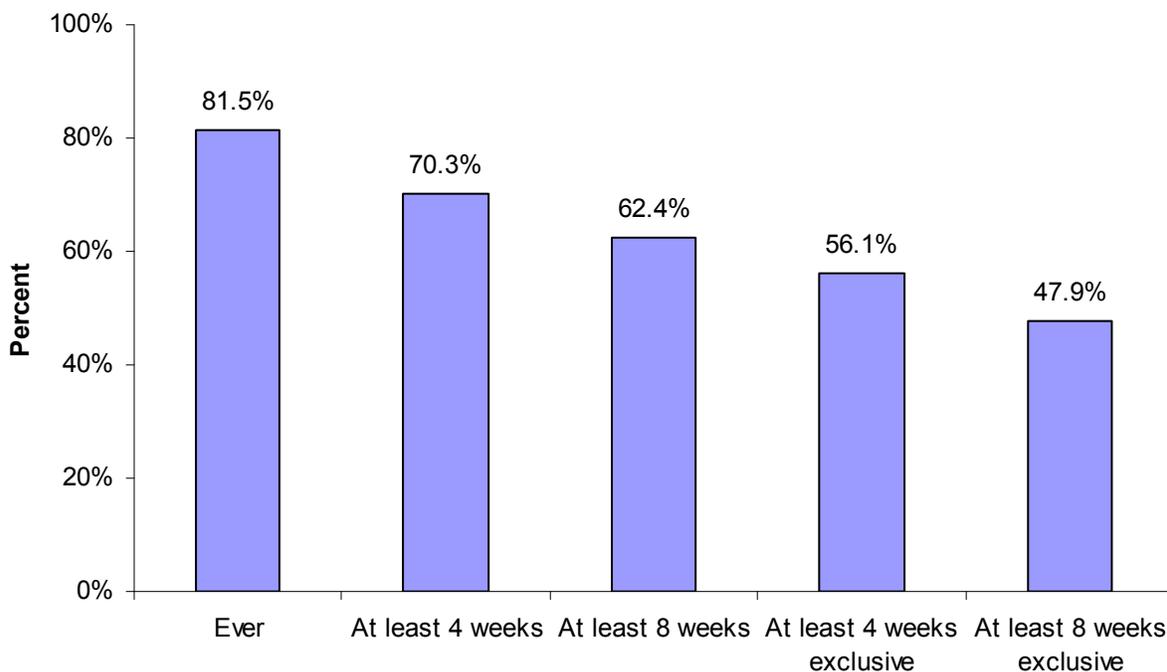
## POST-PARTUM

### Breastfeeding

Except where it is medically contraindicated, exclusive breastfeeding for the first six months of life is recognized as the best and most complete source of nourishment for most infants, associated with lowered risk of infections and certain chronic diseases, and with substantial benefits for many mothers as well, (Gartner, 2005).

Over 81% of respondents reported initiating breastfeeding, a figure which exceeds the Healthy People 2010 goal of 75% initiation (US-DHHS, 2000). Over 70% reported any breastfeeding (exclusive, or with complementary foods) for at least 4 weeks, and 62.4% for at least 8 weeks. About 56% of mothers reported *exclusive* breastfeeding for at least 4 weeks, and almost 50% for exclusive breastfeeding for at least 8 weeks.

**Figure 48. Prevalence of breastfeeding initiation, duration and exclusivity, all mothers, 2007 MA PRAMS**



#### **Massachusetts mothers say...**

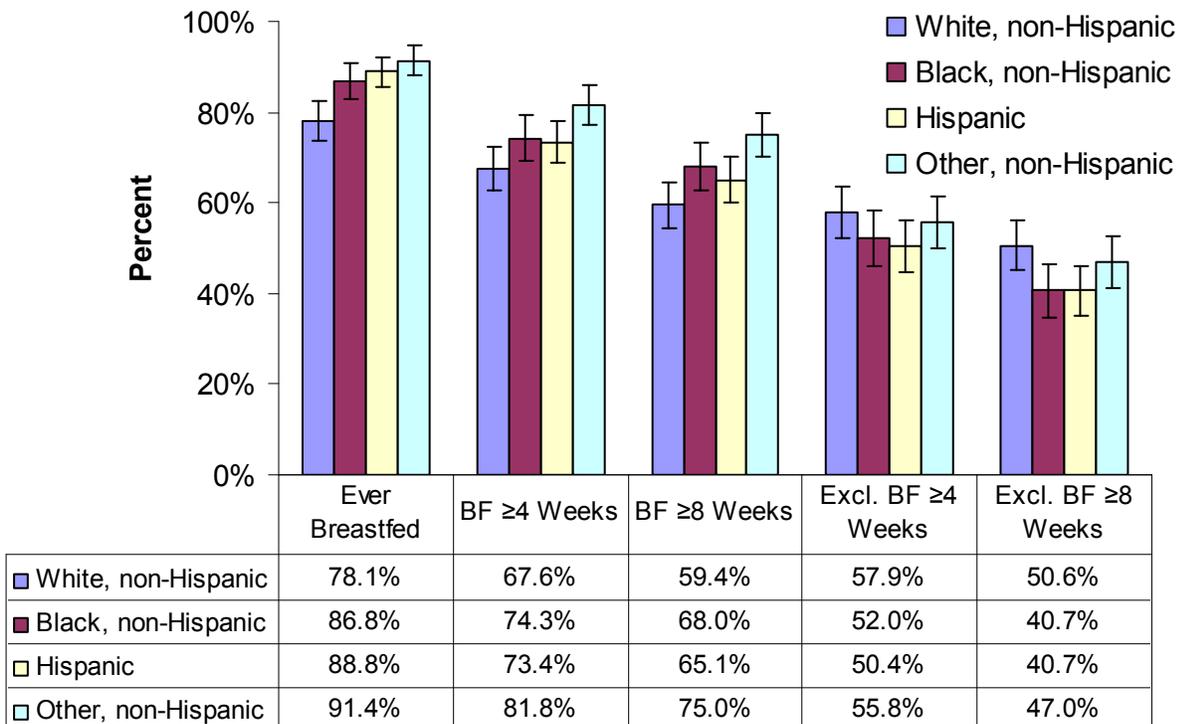
*"I did not feel there was enough support around breast feeding in the hospital. My baby had to be supplemented [with] formula due to losing 10% of his weight. However there was no lactation consultant in the hospital and I had many issues (bleeding, cracked nipples) that made it almost impossible to breast feed...."*

## POST-PARTUM

### Breastfeeding: Differences by race/ethnicity

The prevalence of each of the breastfeeding measures (initiation, overall duration and duration of exclusive breastfeeding) varied by race/ethnicity. The highest rates of breastfeeding initiation and duration to 4 and 8 weeks were among Other, non-Hispanic mothers, and the lowest among White, non-Hispanic mothers. However, White, non-Hispanic mothers were more likely than all other groups to *exclusively* breastfeed for at least 4 and 8 weeks (Figure 49).

**Figure 49. Prevalence of breastfeeding initiation, duration and exclusivity, by maternal race/ethnicity, 2007 MA PRAMS**

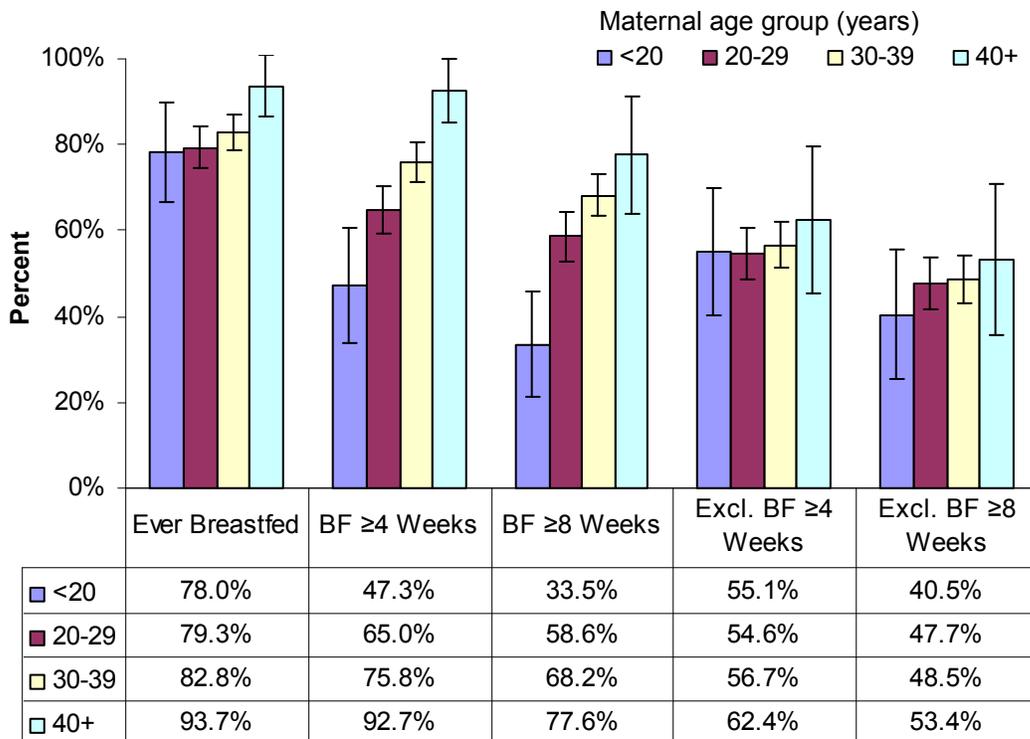


## POST-PARTUM

### Breastfeeding: Differences by age

A general trend of older age associated with greater initiation and duration of breastfeeding was observed. Mothers 40 years and older reported breastfeeding more than younger groups. The difference was most marked and significant in the duration of any breastfeeding to 4 and 8 weeks, but non-significant in duration of exclusive breastfeeding (Figure 50).

**Figure 50. Prevalence of breastfeeding initiation, duration and exclusivity, by maternal age, 2007 MA PRAMS**

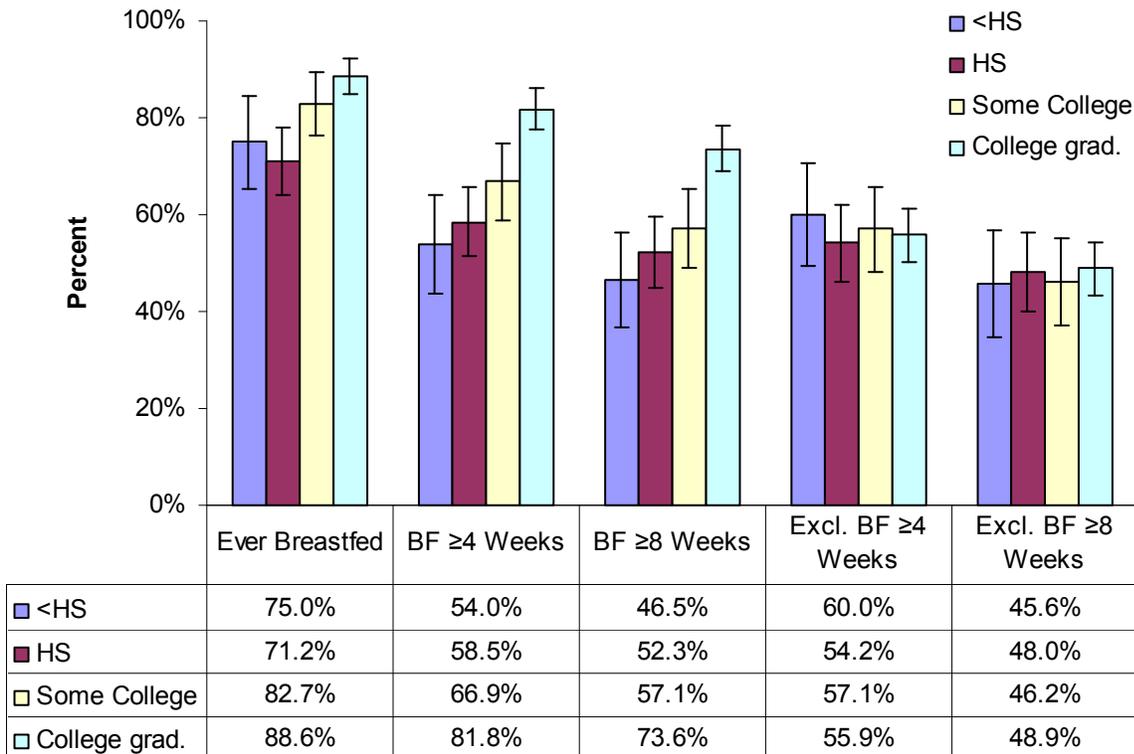


## POST-PARTUM

### Breastfeeding: Differences by education

Breastfeeding initiation and duration to 4 and 8 weeks was highest among those with a college degree. However, no such differences were observed in exclusive breastfeeding by educational attainment (Figure 51).

**Figure 51. Prevalence of breastfeeding initiation, duration and exclusivity, by maternal education, 2007 MA PRAMS**

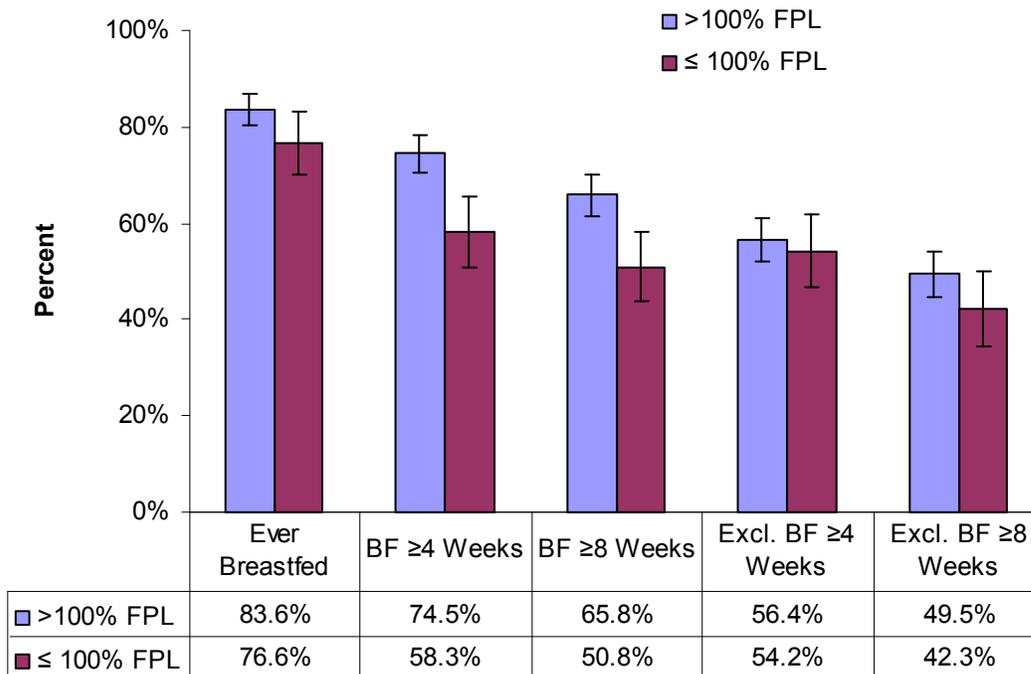


## POST-PARTUM

### Breastfeeding: Difference by poverty level

The magnitude of differences in reported breastfeeding by poverty level were smaller than other socio-demographic measures. While non-poor mothers reported breastfeeding more than poor mothers, the difference was not significant for exclusive breastfeeding to 4 and 8 weeks or ever breastfeeding.

**Figure 52. Breastfeeding initiation, duration and exclusivity, by poverty level, 2007 MA PRAMS**

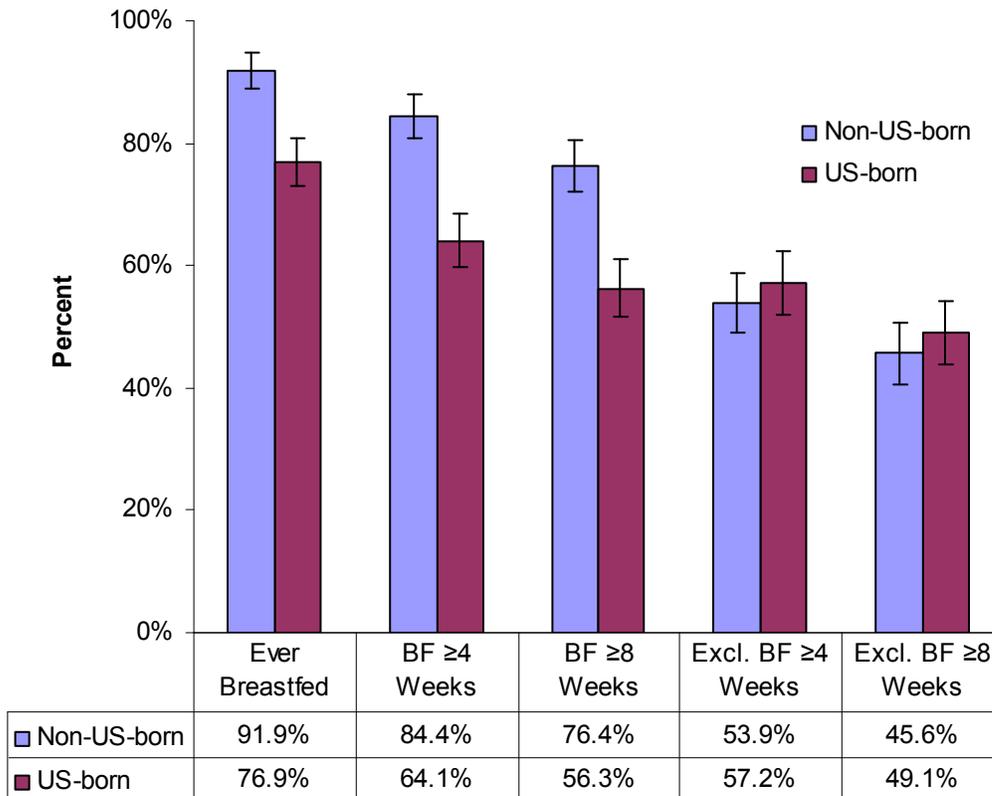


## POST-PARTUM

### Breastfeeding: Difference by maternal nativity

Breastfeeding initiation and duration of any-breastfeeding was higher among non-US-born mothers than US-born. However exclusive breastfeeding was not significantly different between the two groups (Figure 53).

**Figure 53. Prevalence of breastfeeding initiation, duration and exclusivity, by maternal nativity, 2007 MA PRAMS**

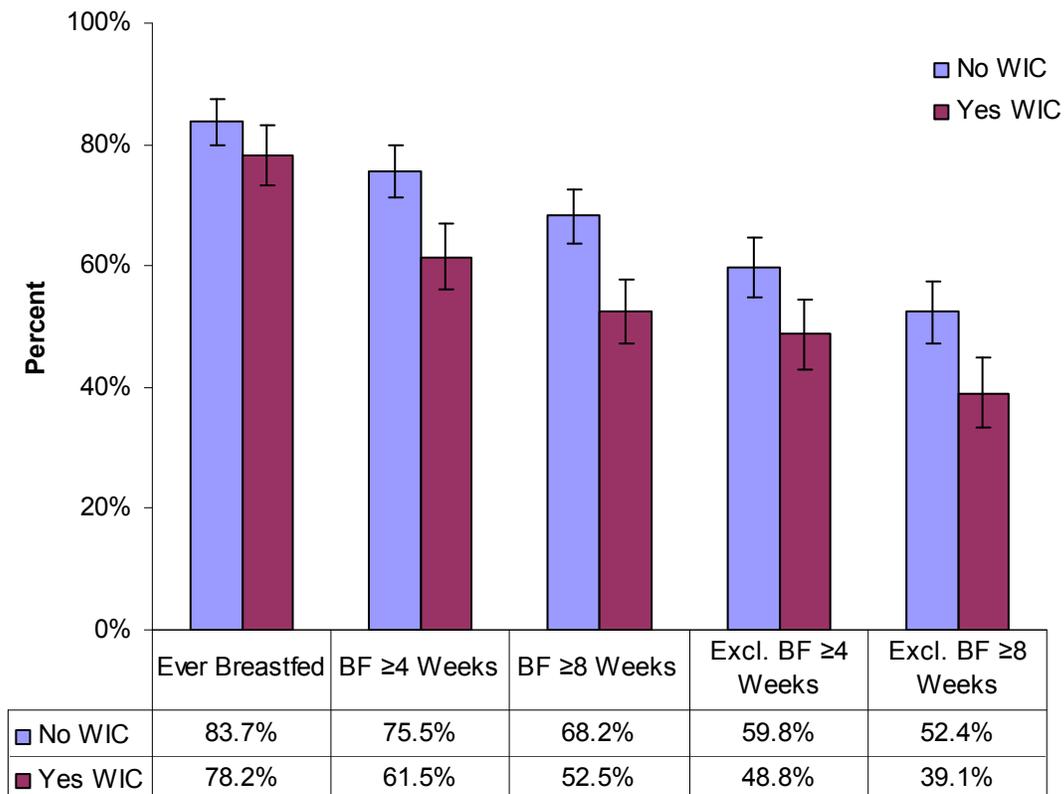


## POST-PARTUM

### Breastfeeding: Difference by WIC participation

Mothers who participated in WIC during pregnancy reported breastfeeding less than those not participating in WIC. The difference was smallest and non-significant for breastfeeding initiation. Larger gaps were seen between the two groups with regard to breastfeeding duration and exclusivity (Figure 54).

**Figure 54. Prevalence of breastfeeding initiation, duration and exclusivity, by WIC participation during pregnancy, 2007 MA PRAMS**



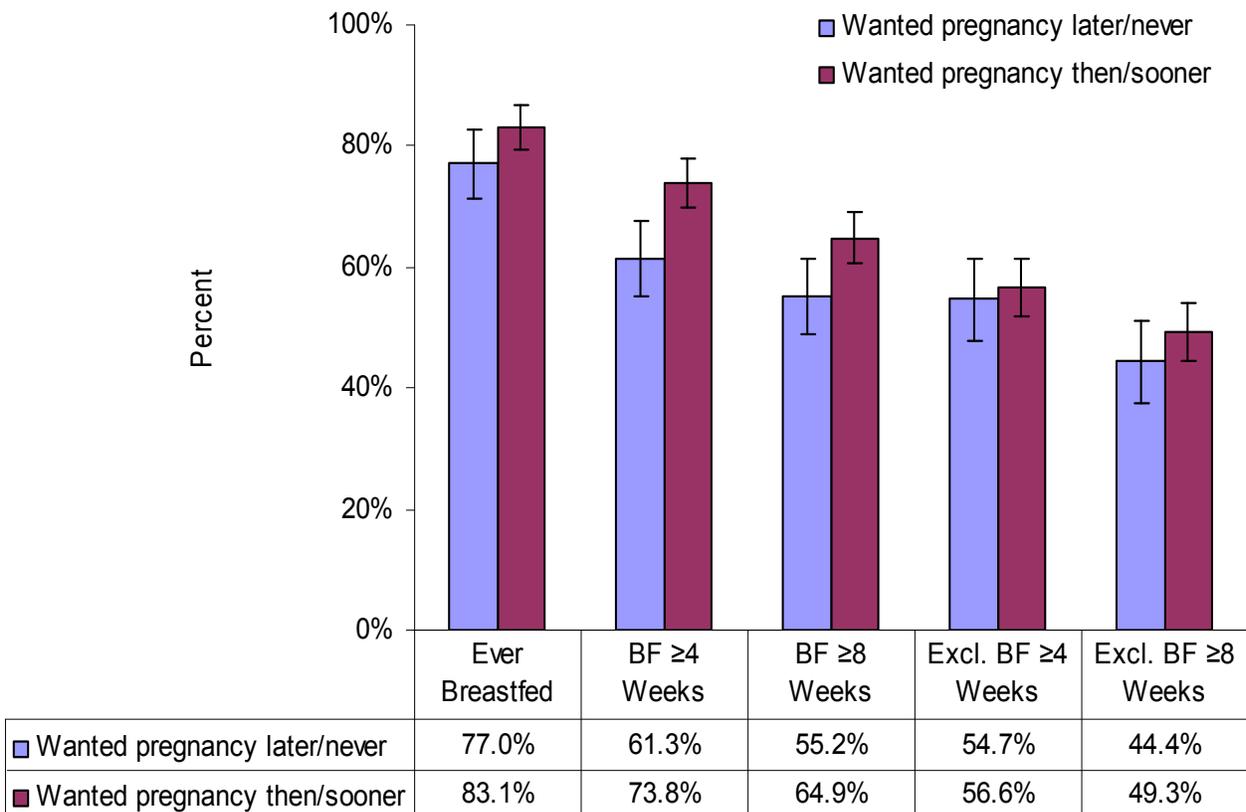
## POST-PARTUM

### Breastfeeding: Difference by pregnancy intention (feelings)

Breastfeeding was also examined in relation to pregnancy intention, or feelings about becoming pregnant right before the pregnancy occurred (Figure 55). Among those reporting that they had wanted the pregnancy then or sooner, 83.1% initiated breastfeeding. Among those reporting that they had wanted to be pregnant later or never, 77.0% initiated breastfeeding.

Breastfeeding duration was similarly associated with intention, with 73.8% and 64.9% breastfeeding to at least 4 and 8 weeks, respectively, among the “wanted pregnancy then/sooner” group, and 61.3% and 55.2% breastfeeding to at least 4 and 8 weeks, respectively, among the “wanted pregnancy later/never” group (Figure 55).

**Figure 55. Prevalence of breastfeeding initiation, duration and exclusivity, by feelings about this pregnancy, 2007 MA PRAMS**



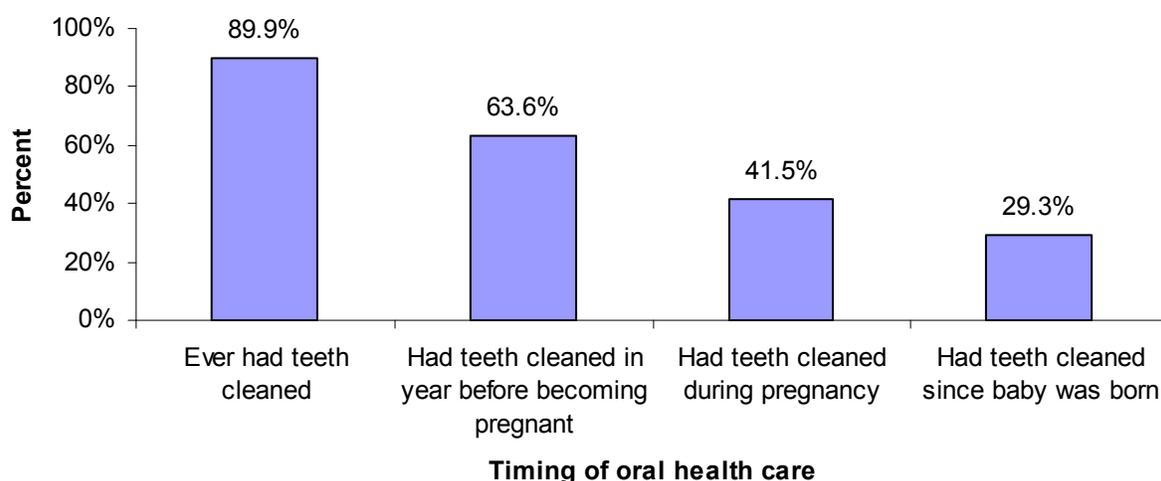
# ORAL HEALTH

## Oral health care

Maintaining good oral health during pregnancy is important to both mother and child. Hormonal changes during pregnancy can cause changes to the gums which may necessitate care. Untreated oral infections or periodontal disease may be associated with preterm delivery (Jeffcoat, 2001).

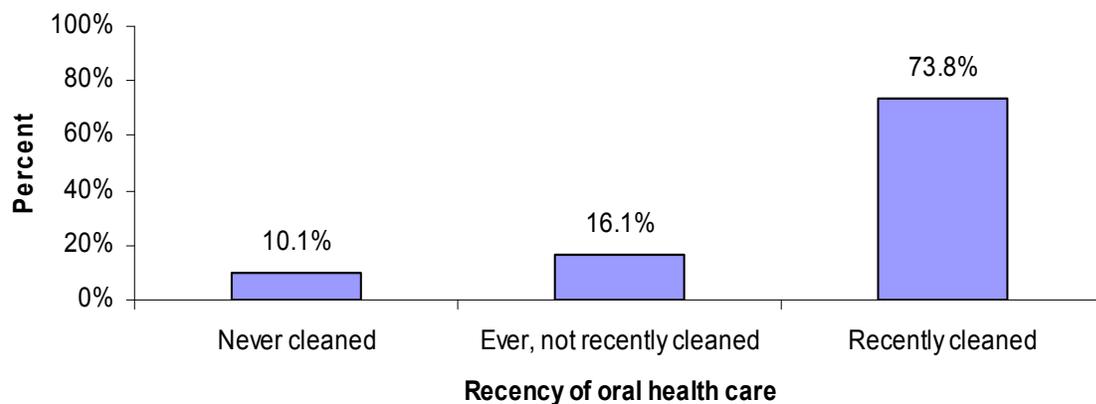
Most mothers (89.9%) reported that they had ever, in their lives, had their teeth cleaned. The majority of mothers (63.6%) had received a cleaning in the year before becoming pregnant, and fewer reported more recent cleaning.

**Figure 56. Prevalence of teeth cleaning, ever, before, during and after pregnancy, 2007 MA PRAMS**



Almost 74% of women indicated that they had received oral health care at least once during the time between the year before becoming pregnant and the present. However, over 16% reported that their last cleaning visit had occurred before the year prior to pregnancy — in most cases this was at least 2 years ago.

**Figure 57. Prevalence of teeth cleaning, never, ever but not recently, or recently, 2007 MA PRAMS**



## ORAL HEALTH

### Oral health care

The prevalence of teeth cleaning (ever) varied by socio-demographic characteristics, with Hispanic mothers (75.8%), non-US-born (75.6%), and those with less than high school education (75.1%) being the least likely to report ever having had a cleaning.

**Table 17. Prevalence of teeth cleaning (ever), by socio-demographic characteristics, 2007 MA PRAMS**

	Weighted n	Weighted %	95% CL
<b>Maternal race/ethnicity</b>			
White, non-Hispanic	48454	95.2	93.0 , 97.3
Black, non-Hispanic	5094	83.3	79.3 , 87.4
Hispanic	8115	75.8	71.5 , 80.1
Other, non-Hispanic	5731	78.9	74.5 , 83.3
<b>Maternal age (years)</b>			
<20	4634	90.7	86.1 , 95.3
20-29	26425	87.4	84.5 , 90.4
30-39	33169	91.2	88.8 , 93.7
40+	3167	95.5	92.0 , 98.9
<b>Maternal education</b>			
<High school	6149	75.1	68.5 , 81.6
High school diploma	16919	84.8	80.3 , 89.3
Some college	11553	91.7	88.1 , 95.2
College graduate	32772	95.8	94.0 , 97.5
<b>Household poverty level</b>			
>100% FPL	50802	95.5	93.9 , 97.0
≤100% FPL	12366	83.8	79.4 , 88.2
<b>Maternal nativity</b>			
Non-US-born	17727	75.6	71.6 , 79.5
US-born	49667	96.4	94.8 , 97.9

## SUBSTANCE USE

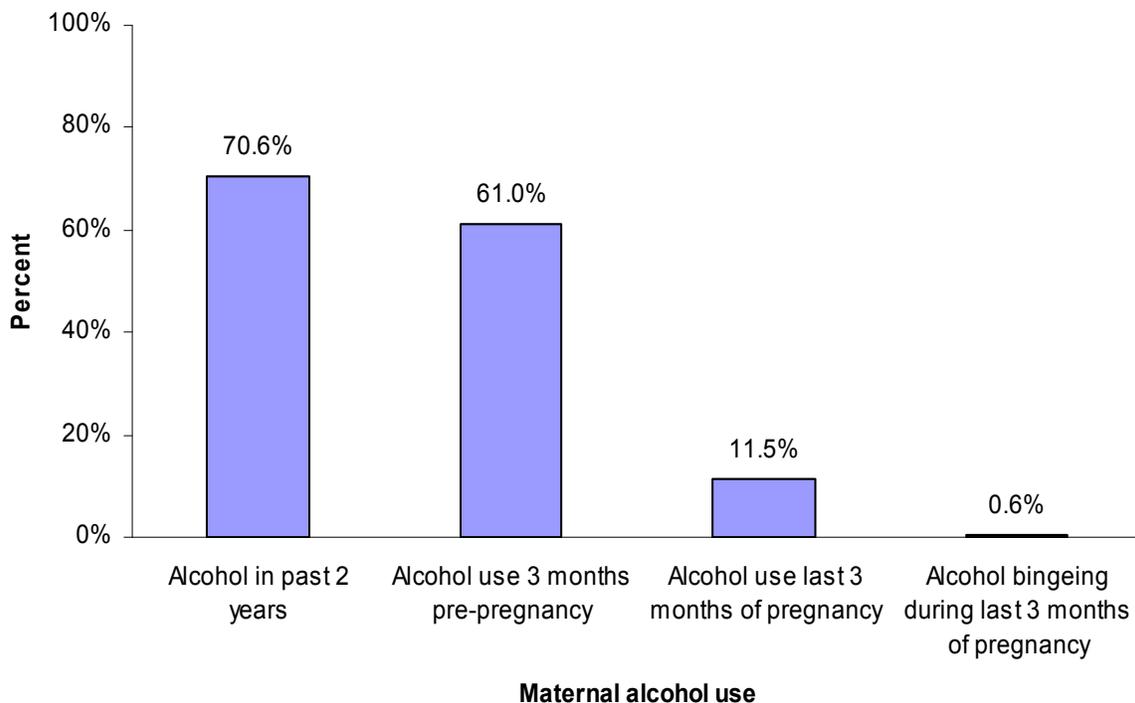
### Alcohol

The PRAMS survey presents a unique opportunity to collect information on substance use during pregnancy. The confidential nature of the data collection method may encourage more mothers to accurately report their substance use.

Excessive alcohol consumption during pregnancy can cause a variety of profound physical and mental disorders in the fetus, known as Fetal Alcohol Spectrum Disorders (FASD). While the hazards of heavy drinking during pregnancy are well known, no amount of alcohol during pregnancy has been established as safe for the fetus (Sokol, 2003).

Most mothers (70.6%) reported ever using alcohol in the past 2 years and 61.0% reporting using alcohol in the three months prior to becoming pregnant. Relatively few (11.5%) reported using any alcohol in the last three months of pregnancy, and less than one percent of mothers reported any alcohol bingeing (drinking more than 5 drinks in one sitting), during the last 3 months of pregnancy (Figure 58).

**Figure 58. Prevalence of maternal alcohol consumption prior to and during pregnancy, 2007 MA PRAMS**



## SUBSTANCE USE

### Alcohol

The highest prevalence of alcohol consumption during the last 3 months of pregnancy was observed among White, non-Hispanic mothers, (14.3%), the highest educated, (17.7%), mothers 40 years and older (20.6% ), those living above the poverty level (13.6%) and US-born (13.5%) (Table 17).

**Table 18. Prevalence of maternal alcohol consumption in the last three months of pregnancy, by socio-demographic characteristics, 2007 MA PRAMS**

Characteristic	Weighted n	Weighted %	95% CL
<b>Maternal race/ethnicity</b>			
White, non-Hispanic	7113	14.3	11.0 , 17.7
Black, non-Hispanic	495	8.4	5.3 , 11.5
Hispanic	471	4.6	2.5 , 6.8
Other, non-Hispanic	307	4.4	2.3 , 6.5
<b>Maternal age (years)</b>			
<20	0	0.0	0.0 , 0.0
20-29	1884	6.4	3.7 , 9.2
30-39	5823	16.7	12.8 , 20.6
40+	680	20.6	6.5 , 34.7
<b>Maternal education</b>			
<High school	210	2.6	0.0 , 6.5
High school diploma	1427	7.4	3.6 , 11.3
Some college	852	7.0	2.7 , 11.2
College graduate	5898	17.7	13.6 , 21.8
<b>Household poverty level</b>			
>100% FPL	7118	13.6	10.6 , 16.6
≤100% FPL	801	5.6	2.4 , 8.7
<b>Maternal nativity</b>			
Non-US-born	1633	7.2	4.3 , 10.1
US-born	6754	13.5	10.4 , 16.7

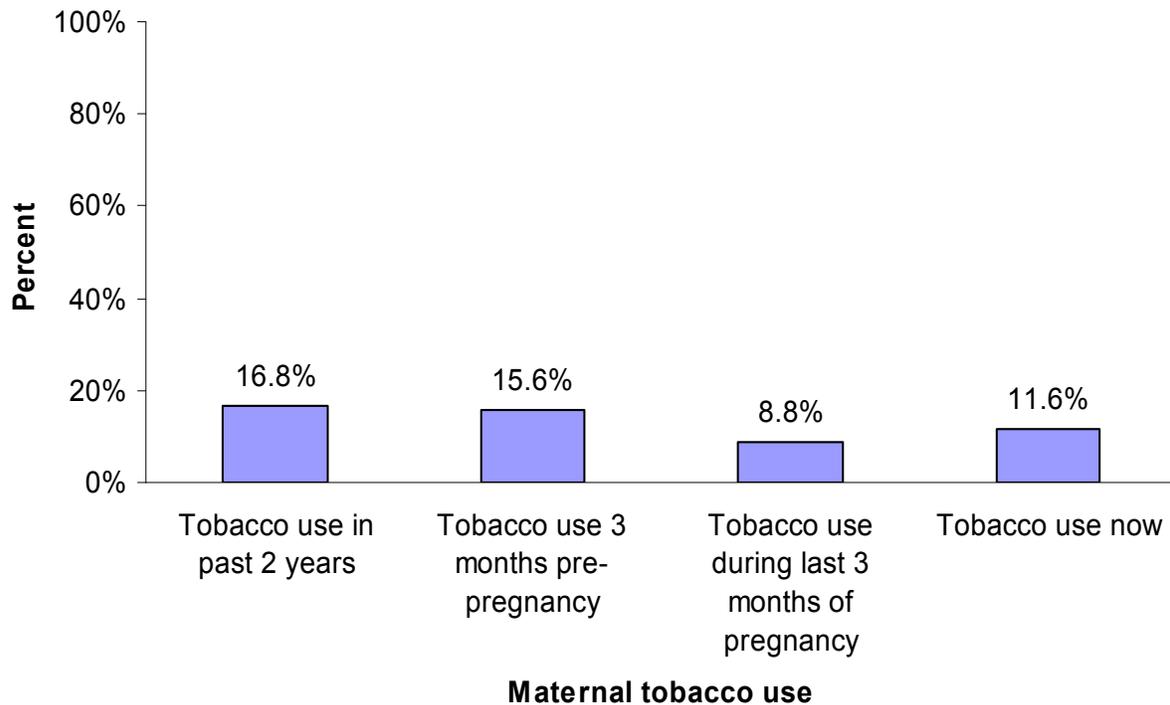
## SUBSTANCE USE

### Tobacco

Smoking during pregnancy presents multiple hazards to the health of mothers and infants. Smoking has been associated with preterm birth, low birth weight, stillbirth and infant mortality. Smoking may also be associated with pregnancy complications including placenta previa and placental abruption (DiFranza, 1995; Castles, 1999).

Almost 16% of mothers reported using tobacco in the three months before becoming pregnant and 8.8% percent of mothers reported some use during the last 3 months of pregnancy (Figure 59).

**Figure 59. Prevalence of maternal tobacco use prior to and during pregnancy, 2007 MA PRAMS**



## SUBSTANCE USE

### Tobacco

The highest prevalence of smoking was observed among White, non-Hispanic mothers (10.3%), those with less than a high school education (18.3%), aged 20 to 29 years (14.7%), living at or below the poverty level (16.7%), and US-born (11.9%) (Table 19).

**Table 19. Prevalence of maternal tobacco use during the last three months of pregnancy, by socio-demographic characteristics, 2007 MA PRAMS**

Characteristic	Weighted n	Weighted %	95% CL
<b>Maternal race/ethnicity</b>			
White, non-Hispanic	5187	10.3	7.2 , 13.4
Black, non-Hispanic	397	6.6	3.7 , 9.4
Hispanic	665	6.5	3.9 , 9.1
Other, non-Hispanic	243	3.5	1.4 , 5.5
<b>Maternal age (years)</b>			
<20	411	8.1	1.6 , 14.7
20-29	4389	14.7	10.5 , 19.0
30-39	1668	4.7	2.3 , 7.2
40+	24	0.7	0.0 , 2.1
<b>Maternal education</b>			
<High school	1446	18.3	9.7 , 26.8
High school diploma	2527	12.9	7.6 , 18.1
Some college	1905	15.5	9.2 , 21.9
College graduate	614	1.8	0.3 , 3.3
<b>Household poverty level</b>			
>100% FPL	3111	5.9	3.7 , 8.0
≤100% FPL	2450	16.7	10.8 , 22.7
<b>Maternal nativity</b>			
Non-US-born	486	2.1	0.8 , 3.5
US-born	6006	11.9	8.8 , 14.9

# **Appendix A.**

## **Supplemental Data Tables\***

*\*The following data tables reflect questions in the order that they appear in the Massachusetts PRAMS 2007 survey.*

## APPENDIX A. Supplemental Data Tables

Table 1. From survey questions 1-2, Prevalence of insurance types prior to pregnancy, 2007 MA PRAMS

<b>Question</b>		<b>Sample n</b>	<b>Weighted n</b>	<b>Weighted %</b>	<b>95% CL</b>
Any non-Medicaid insurance before pregnancy					
	No	492	19105	26.7	23.8 , 29.6
	Yes	989	53597	73.3	70.4 , 76.2
Medicaid before pregnancy					
	No	1082	60436	81.0	78.7 , 83.3
	Yes	395	14177	19.0	16.7 , 21.3
Source of insurance before pregnancy					
	Private/HMO only	811	48297	64.8	61.8 , 67.9
	Medicaid only	218	7753	10.4	8.6 , 12.2
	Both private and Medicaid	172	6303	8.5	6.8 , 10.1
	No insurance	271	12140	16.3	13.8 , 18.8

Table 2. From survey question 3, Prevalence of daily multivitamin use in the month prior to pregnancy, 2007 MA PRAMS

<b>Question</b>		<b>Sample n</b>	<b>Weighted n</b>	<b>Weighted %</b>	<b>95% CL</b>
Prenatal vitamin use					
	Every day	734	33719	45.2	41.8 , 48.6
	< Every day	229	13346	17.9	15.2 , 20.6
	Never	517	27511	36.9	33.6 , 40.2

## APPENDIX A. Supplemental Data Tables

Table 3. From survey questions 5-6, Maternal Body Mass Index (BMI) immediately prior to pregnancy (derived from maternal report of height and weight), 2007 MA PRAMS

<b>Question</b>	<b>Sample n</b>	<b>Weighted n</b>	<b>Weighted %</b>	<b>95% CL</b>
Maternal BMI, pre-pregnancy				
Underweight (<18.5)	83	3366	4.7	3.3 , 6.1
Normal (18.5 - 24.9)	794	41666	58.5	55.0 , 62.0
Overweight (25.0 - 29.9)	326	16289	22.9	19.9 , 25.8
Obese (≥ 30)	191	9869	13.9	11.4 , 16.4

Table 4. From survey question 7, Maternal self-rated health post-partum, 2007 MA PRAMS

<b>Question</b>	<b>Sample n</b>	<b>Weighted n</b>	<b>Weighted %</b>	<b>95% CL</b>
Maternal self-rated health, current				
Excellent	420	22628	30.3	27.1 , 33.5
Very Good	588	30982	41.5	38.1 , 44.9
Good	394	17705	23.7	20.8 , 26.6
Fair	77	2823	3.8	2.6 , 4.9
Poor	5	483	0.6	0.0 , 1.3

Table 5. From survey questions 8-10, Prevalence of previous low birth weight and previous preterm births among multiparous mothers, 2007 MA PRAMS

<b>Question</b>	<b>Sample n</b>	<b>Weighted n</b>	<b>Weighted %</b>	<b>95% CL</b>
Birth History				
Previous live births				
No	667	34984	47.1	43.6 , 50.5
Yes	795	39365	52.9	49.5 , 56.4
Previous low birth weight (among multiparas)				
No	668	34490	90.3	87.9 , 92.7
Yes	104	3702	9.7	7.3 , 12.1
Previous preterm birth (among multiparas)				
No	680	34327	88.5	85.7 , 91.3
Yes	106	4456	11.5	8.7 , 14.3

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Table 6. From survey question 11, Feelings about becoming pregnant prior to this pregnancy, 2007 MA PRAMS

<b>Question</b>	<b>Sample n</b>	<b>Weighted n</b>	<b>Weighted %</b>	<b>95% CL</b>
Pregnancy feelings				
Wanted sooner	306	15861	21.6	18.8 , 24.5
Wanted later	409	17606	24.0	21.1 , 26.9
Wanted right then	630	34845	47.5	44.0 , 51.0
Wanted never	113	5027	6.9	5.1 , 8.6

Table 7. From survey question 12, Proportion of women trying to become pregnant, 2007 MA PRAMS

<b>Question</b>	<b>Sample n</b>	<b>Weighted n</b>	<b>Weighted %</b>	<b>95% CL</b>
Trying to get pregnant				
No	693	31288	42.3	38.9 , 45.7
Yes	770	42614	57.7	54.3 , 61.1

Table 8. From survey question 13, Prevalence of pre-pregnancy contraception use among women who were not trying to become pregnant, 2007 MA PRAMS

<b>Question</b>	<b>Sample n</b>	<b>Weighted n</b>	<b>Weighted %</b>	<b>95% CL</b>
Used birth control (among unintended)				
No	385	18060	58.9	53.7 , 64.1
Yes	295	12615	41.1	35.9 , 46.3

Table 9. From survey question 14, Reasons for not using a contraceptive method prior to pregnancy among women not trying to get pregnant, 2007 MA PRAMS

<b>Question</b>	<b>Sample n</b>	<b>Weighted n</b>	<b>Weighted %</b>	<b>95% CL</b>
Reasons for not using birth control (if unintended and no birth control)				
Didn't mind getting pregnant	208	10162	51.6	44.9 , 58.2
Didn't think could become pregnant	119	4585	23.3	17.9 , 28.6
Partner didn't want to use	76	2751	14.0	9.7 , 18.2
Other	46	2769	14.0	9.0 , 19.1
Side effects from BC	48	2028	10.3	6.4 , 14.2
Thought partner was sterile	27	1207	6.1	3.0 , 9.2
Problems acquiring BC	14	452	2.3	0.5 , 4.0

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Table 10. From survey questions 15-16, Prevalence of fertility treatment use, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Had any help getting pregnant (among those trying only)				
No	664	36653	86.5	83.3 , 89.6
Yes	102	5727	13.5	10.4 , 16.7
Kinds of reproductive assistance (among those reporting any fertility treatment)				
Drugs	46	2797	40.9	29.6 , 52.3
Artificial Insemination	19	1008	14.7	6.7 , 22.7
ART (IVF, other)	39	2758	40.2	29.0 , 51.4
Other treatment	21	1061	15.5	7.3 , 23.6

Table 11. From survey question 17, Weeks pregnant when sure of pregnancy, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Weeks pregnant when sure of pregnancy				
0 to 4	665	36150	51.6	48.0 , 55.1
5 to 8	506	26681	38.1	34.6 , 41.6
9 to 12	120	4098	5.8	4.4 , 7.3
13+	90	3184	4.5	3.2 , 5.8

Table 12. From survey question 18, Timing of entry to prenatal care, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Initiated prenatal care in 1st trimester				
No	260	62855	13.8	11.6 , 16.0
Yes	1169	10128	85.6	83.3 , 87.8
No PNC	16	472	0.6	0.3 , 1.0

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Table 13. From survey question 19, Prevalence of women receiving prenatal care as early as wanted, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Received prenatal care as early as wanted				
No	177	7704	10.4	8.3 , 12.4
Yes	1277	65902	88.7	86.6 , 90.8
Didn't want prenatal care	22	713	1.0	0.4 , 1.5

Table 14. From survey question 20, Reasons for not getting prenatal care as early as wanted, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Reasons for not getting prenatal care as early as wanted				
Couldn't get appt	121	4668	6.9	5.2 , 8.5
Couldn't afford	87	3006	4.4	3.2 , 5.7
Transportation	81	2958	4.4	3.1 , 5.7
Couldn't take time off from work	66	2565	3.8	2.6 , 5.0
Doctor/health plan wouldn't start earlier	87	3367	5.0	3.6 , 6.5
Didn't have Medicaid card	96	3686	5.5	4.0 , 7.0
Childcare	64	2419	3.6	2.4 , 4.8
Too many other things going on	95	3589	5.4	3.9 , 6.8
Didn't want to disclose pregnancy	73	2854	4.3	3.0 , 5.6
Other	43	1646	3.6	2.1 , 5.1

Table 15. From survey question 21, Sources of payment for prenatal care, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Source of payment for prenatal care				
Medicaid	631	25801	34.9	31.8 , 38.0
Personal income	118	6066	8.2	6.3 , 10.2
Health insurance/HMO	785	46794	63.4	60.3 , 66.5
Free Care	121	4285	5.8	4.4 , 7.2
Other	46	2656	3.6	2.2 , 5.0

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Table 16. From survey question 22, Topics discussed by health care providers during prenatal care visits, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Topics discussed during prenatal care visits				
Smoking	1051	52306	72.1	69.0 , 75.3
Breastfeeding	1203	60321	83.3	80.6 , 86.0
Alcohol	1078	53827	74.2	71.2 , 77.3
Seat belts	822	38700	53.6	50.1 , 57.1
BC after pregnancy	1135	56086	77.8	74.7 , 80.8
Safe medications during pregnancy	1249	64207	88.9	86.7 , 91.0
Illegal drugs	959	46696	64.7	61.3 , 68.0
Birth defects screening	1278	66570	92.4	90.7 , 94.2
What to do if preterm labor	1207	61494	85.9	83.4 , 88.4
HIV testing	1151	55234	77.0	74.0 , 80.1
Physical abuse by partners (IPV)	873	41537	58.0	54.5 , 61.5

Table 17. From survey questions 23-26, Prevalence of HIV testing, offer and refusal during pregnancy, and reasons for declining HIV testing, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Tested for HIV				
Not tested	365	23110	31.7	28.4 , 35.0
Tested	967	43322	59.5	56.1 , 63.0
Don't know	112	6373	8.8	6.7 , 10.8
Offered an HIV test (population estimate)				
Not offered	280	17680	24.6	21.5 , 27.7
Offered	1145	54271	75.4	72.3 , 78.5
Refused HIV test (population estimate)				
Did not refuse	1300	64019	88.6	86.2 , 90.9
Refused	127	8249	11.4	9.1 , 13.8
Reasons for declining HIV test (among those declining)				
Didn't think at risk	63	3805	38.5	28.7 , 48.2
Didn't want people to think at risk	3	244	2.5	0.0 , 5.6
Afraid of getting result	4	182	1.8	0.0 , 4.2
Previously tested	77	4985	50.4	40.4 , 60.4
Other	7	642	6.5	1.3 , 11.7

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Table 18. From survey question 27, Prevalence of WIC participation during pregnancy, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
WIC during pregnancy				
No	735	45422	61.8	58.7 , 64.9
Yes	721	28047	38.2	35.1 , 41.3

Table 19. From survey question 28, Maternal health complications during pregnancy, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Health Complications During Pregnancy (% yes)				
Severe nausea/vomiting	447	20151	27.8	24.7 , 30.9
Preterm labor	239	12572	17.4	14.7 , 20.1
Vaginal bleeding	225	11544	15.9	13.4 , 18.5
Kidney/bladder infection	184	9141	12.6	10.3 , 15.0
Hypertension or preeclampsia or toxemia	148	8206	11.3	9.1 , 13.6
Gestational Diabetes	122	5089	7.0	5.4 , 8.7
Placental problems	74	4527	6.3	4.5 , 8.1
PROM	65	2693	3.7	2.5 , 5.0
Car accident	50	1730	2.4	1.4 , 3.3
Pre-existing Diabetes	32	918	1.3	0.7 , 1.8
Blood transfusion	19	717	1.0	0.4 , 1.6
Incompetent cervix	23	548	0.8	0.4 , 1.1

Table 20. From survey question 29, Prevalence of maternal hospitalization and bed rest among women with complications during pregnancy, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Hospitalization during pregnancy (among those with complications)				
No	1135	59861	89.8	87.6 , 91.9
Yes	159	6835	10.2	8.1 , 12.4
Bed rest >2 days (among those with complications)				
No	534	26045	70.7	66.3 , 75.2
Yes	224	10774	29.3	24.8 , 33.7

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Table 21. From survey questions 30-33, Prevalence of maternal tobacco use prior to, during and after pregnancy, 2007 MA PRAMS

Question		Sample n	Weighted n	Weighted %	95% CL
Tobacco use in past 2 years					
	No	1255	60483	83.2	80.3 , 86.0
	Yes	181	12242	16.8	14.0 , 19.7
Tobacco use 3 months pre-pregnancy					
	No	1272	61367	84.4	81.6 , 87.2
	Yes	167	11350	15.6	12.8 , 18.4
Tobacco use during last 3 months of pregnancy					
	No	1358	67055	91.2	89.0 , 93.4
	Yes	94	6492	8.8	6.6 , 11.0
Tobacco use now					
	No	1326	64998	88.4	85.9 , 90.8
	Yes	126	8550	11.6	9.2 , 14.1
Changes in tobacco use during pregnancy					
	Non smoker	1271	61336	84.4	81.6 , 87.2
	Smoker quit	73	4857	6.7	4.8 , 8.6
	Smoker reduced	52	3792	5.2	3.5 , 7.0
	Smoker same/more	42	2700	3.7	2.3 , 5.2
	Non-smoker resumed	0	0	0.0	0.0 , 0.0

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Table 22. From survey questions 34-36, Prevalence of maternal alcohol consumption and bingeing prior to and during pregnancy, 2007 MA PRAMS

Question		Sample n	Weighted n	Weighted %	95% CL
Alcohol in past 2 years					
	No	641	21599	29.4	26.6 , 32.1
	Yes	810	51948	70.6	67.9 , 73.4
Alcohol use 3 months pre-pregnancy					
	No	786	28283	39.0	35.9 , 42.1
	Yes	646	44190	61.0	57.9 , 64.1
Alcohol bingeing during 3 months before pregnancy					
	No	1289	59468	79.3	76.3 , 82.3
	Yes	200	15538	20.7	17.7 , 23.7
Alcohol use last 3 months of pregnancy					
	No	1311	64235	88.5	86.1 , 90.8
	Yes	123	8386	11.5	9.2 , 13.9
Alcohol bingeing during last 3 months of pregnancy					
	No	1426	74557	99.4	98.9 , 99.9
	Yes	11	449	0.6	0.1 , 1.1
Change in alcohol during pregnancy					
	Non drinker	781	28154	38.9	35.8 , 42.0
	Drinker quit	523	35811	49.5	46.1 , 52.9
	Drinker reduced	68	5388	7.4	5.5 , 9.4
	Drinker same/more	52	2914	4.0	2.6 , 5.4
	Non-drinker began	3	85	0.1	0.0 , 0.3

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Table 23. From survey question 37, Prevalence of stressful life events during pregnancy, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Maternal stressors in 12 months before baby was born				
Family member sick	264	15734	21.6	18.6 , 24.5
Separation/divorce	122	4601	6.3	4.8 , 7.8
Moved to new address	461	22672	31.0	27.7 , 34.2
Homeless	60	1805	2.5	1.7 , 3.2
Partner lost job	159	7587	10.4	8.3 , 12.5
Mother lost job	135	5902	8.1	6.3 , 10.0
Argued with partner more	363	16293	22.4	19.5 , 25.2
Partner said didn't want pregnancy	139	5757	7.9	6.1 , 9.7
Had bills couldn't pay	297	14690	20.2	17.3 , 23.0
In a physical fight	53	1743	2.4	1.5 , 3.3
Partner went to jail	36	2007	2.7	1.5 , 4.0
Someone close had problem with				
drinking/drugs	127	8497	11.6	9.2 , 14.0
Someone close died	210	11913	16.3	13.6 , 19.0
				0.0 , 0.0
At least 1 family-related stressor	530	24856	33.1	29.9 , 36.3
At least 1 financial stressor	718	34128	45.5	42.1 , 48.9
At least 1 illness/death-related stressor	369	20983	28.0	24.8 , 31.1
Number of stressors (grouped)				
None	475	24274	33.0	29.7 , 36.3
1 to 2	623	31999	43.5	40.0 , 47.0
3 to 5	294	14723	20.0	17.2 , 22.8
6 to 18	60	2579	3.5	17.2 , 22.8

Table 24. From survey questions 38-39, Prevalence of intimate partner violence prior to and during pregnancy, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Intimate partner violence, before pregnancy				
No	1383	71029	97.0	96.0 , 98.0
Yes	59	2187	3.0	2.0 , 4.0
Intimate partner violence, during pregnancy				
No	1386	71231	97.6	96.7 , 98.6
Yes	46	1746	2.4	1.4 , 3.3
Intimate partner violence (either before or during pregnancy)				
No	1354	70114	96.1	95.0 , 97.3
Yes	77	2839	3.9	2.7 , 5.0

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Table 25. From survey question 44, Prevalence of delivery payment sources, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Delivery payment source (all that apply)				
Medicaid	677	26613	36.1	33.0 , 39.2
Personal income	98	6261	8.6	6.5 , 10.6
Private insurance	794	47825	65.0	61.9 , 68.1
Free Care	85	2933	4.0	2.9 , 5.1
Other	33	1912	2.6	1.4 , 3.8

Table 26. From survey questions 45-46, Infant-stay in the neonatal intensive unit (NICU) and length of infant hospital stay at birth, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Baby ever in NICU				
No	1229	63326	87.3	85.0 , 89.7
Yes	188	9178	12.7	10.3 , 15.0
Baby stay in hospital				
Not born in hospital	5	283	0.4	0.0 , 0.8
<1 day	25	1272	1.7	0.8 , 2.6
1 to 2 days	601	32269	44.1	40.6 , 47.6
3 to 5 days	689	34053	46.5	43.0 , 50.0
6+ days	117	5292	7.2	5.4 , 9.0

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Table 27. From survey questions 47-48, Infant alive now, infant living with mother, 2007 MA PRAMS

Question		Sample n	Weighted n	Weighted %	95% CL
Infant alive now?					
	No	11	444	0.6	0.1 , 1.1
	Yes	1404	71808	99.4	98.9 , 99.9
Infant living with mother now?					
	No	5	394	0.6	0.0 , 1.2
	Yes	1387	70683	99.4	98.8 , 100.0

Table 28. From survey questions 49-52, Prevalence of ever breastfeeding, any breastfeeding at 4- and 8-weeks post-partum, and exclusivity at 4- and 8-weeks post-partum, 2007 MA PRAMS

Question		Sample n	Weighted n	Weighted %	95% CL
Breastfeeding (Ever)					
	No	187	13194	18.5	15.5 , 21.4
	Yes	1220	58255	81.5	78.6 , 84.5
Duration of breastfeeding (to at least 4 weeks)					
	No	341	21016	29.7	26.3 , 33.1
	Yes	1045	49693	70.3	66.9 , 73.7
Duration of breastfeeding (to at least 8 weeks)					
	No	442	26594	37.6	34.1 , 41.1
	Yes	944	44115	62.4	58.9 , 65.9
Exclusive breastfeeding (to at least 4 weeks)					
	No	548	25186	43.9	40.1 , 47.8
	Yes	644	32148	56.1	52.2 , 59.9
Exclusive breastfeeding (to at least 8 weeks)					
	No	655	29875	52.1	48.2 , 56.0
	Yes	537	27459	47.9	44.0 , 51.8

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Table 29. From survey question 53, Hours per day infant in the same room with someone who is smoking, 2007 MA PRAMS

<b>Question</b>	<b>Sample n</b>	<b>Weighted n</b>	<b>Weighted %</b>	<b>95% CL</b>
Baby smoke exposure				
0 hours per day	1356	69196	97.5	96.3 , 98.7
1 hours per day	22	1184	1.7	0.7 , 2.7
2+ hours per day	9	559	0.8	0.1 , 1.5

Table 30. From survey question 54, Prevalence of infant sleep position, 2007 MA PRAMS

<b>Question</b>	<b>Sample n</b>	<b>Weighted n</b>	<b>Weighted %</b>	<b>95% CL</b>
Sleep position				
Side	234	9869	13.8	11.5 , 16.1
Back	961	52839	74.1	71.2 , 77.1
Stomach	140	6099	8.6	6.7 , 10.4
More than one position	65	2463	3.5	2.3 , 4.6

Table 31. From survey questions 55-56, Proportion of infants seen by a health care provider (HCP) within a week after leaving hospital and proportion who received a well-baby checkup, 2007 MA PRAMS

<b>Question</b>	<b>Sample n</b>	<b>Weighted n</b>	<b>Weighted %</b>	<b>95% CL</b>
Baby seen by HCP within week after leaving hospital				
No	83	3769	5.3	3.8 , 6.8
Yes	1314	67278	94.7	93.2 , 96.2
Baby has had well-baby visit				
No	21	1027	1.4	0.6 , 2.3
Yes	1380	70180	98.6	97.7 , 99.4

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Table 32. From survey question 57, Prevalence of infant health insurance types, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Baby insurance				
Medicaid	677	27391	37.7	34.5 , 40.9
Private insurance	728	44128	61.0	57.8 , 64.2
Other	86	4097	5.6	4.0 , 7.2
No insurance	0	0	0.0	0.0 , 0.0

Table 33. From survey questions 58-59, Prevalence of contraception use post-partum and reasons for not using a contraception method, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Current birth control use				
Not currently using birth control	288	14138	19.5	16.7 , 22.2
Currently using birth control	1136	58446	80.5	77.8 , 83.3
If no current birth control, why not				
Not having sex	124	5031	33.5	26.6 , 40.4
Other	66	3827	25.5	18.7 , 32.3
Don't want to use BC	63	3721	24.8	17.9 , 31.6
Want to get pregnant	40	2017	13.4	8.3 , 18.6
Partner doesn't want to use BC	23	1096	7.3	3.2 , 11.4
Don't think can get pregnant	19	708	4.7	1.9 , 7.6
Pregnant now	9	431	2.9	0.5 , 5.2
Can't pay for BC	5	249	1.7	0.0 , 3.8

Table 34. From survey question 60, Prevalence of maternal post-partum checkup, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Mother had post-partum check-up				
No	115	5725	7.9	6.0 , 9.8
Yes	1312	66940	92.1	90.2 , 94.0

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Table 35. From survey question 61, Sources of household income, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Sources of income, 12 months before baby was born				
Paycheck	1210	64384	87.8	85.7 , 89.8
Public assistance	277	10651	14.5	12.3 , 16.7
Family/friends	188	8956	12.2	9.9 , 14.5
Business, other income	64	4189	5.7	4.0 , 7.4
Child support/alimony	49	2477	3.4	2.1 , 4.7
Social Security, etc.	44	2282	3.1	1.8 , 4.4
Unemployment	49	1972	2.7	1.7 , 3.7
Other	40	1862	2.5	1.5 , 3.6

Table 36. From survey question 62, Total household income, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Total household income in 12 months before baby was born				
LESS THAN \$10,000	259	9455	13.8	11.6 , 16.0
\$10,000 TO \$14,999	120	4798	7.0	5.3 , 8.7
\$15,000 TO \$19,999	87	3559	5.2	3.7 , 6.7
\$20,000 TO \$24,999	82	3123	4.6	3.2 , 5.9
\$25,000 TO \$34,999	131	6041	8.8	6.8 , 10.9
\$35,000 TO \$49,999	105	4796	7.0	5.1 , 8.9
\$50,000 OR MORE	544	36701	53.6	50.2 , 57.0

Table 37. From survey question 64, Prevalence of knowledge of emergency contraception (the “morning-after” pill), 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Knew about Morning After Pill				
No	335	11125	15.3	13.1 , 17.4
Yes	1098	61778	84.7	82.6 , 86.9

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Table 38. From survey questions 65-67, Frequency of physical activity prior to and during pregnancy; servings of fruits/vegetables per day in the last trimester of pregnancy, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Exercise, days/week, 3 mo. prior to pregnancy				
<1 days/wk	574	25832	35.5	32.2 , 38.9
1 to 4 days/wk	646	35509	48.9	45.3 , 52.4
5+ days/wk	201	11328	15.6	13.0 , 18.2
Exercise, last 3 mo. pregnancy				
<1 days/wk	729	38273	53.0	49.5 , 56.5
1 to 4 days/wk	502	25627	35.5	32.1 , 38.9
5+ days/wk	100	4131	5.7	4.2 , 7.2
Told not to exercise	78	4156	5.8	4.1 , 7.4
Fruits and vegetables servings/day, last 3 mo. pregnancy				
< 1 servings/day	109	4594	6.3	4.7 , 7.9
1 to 2 servings/day	635	30828	42.3	38.9 , 45.8
3 to 4 servings/day	528	28572	39.2	35.8 , 42.7
5+ servings/day	155	8836	12.1	9.8 , 14.5

Table 39. From survey question 68, Timing of discussion of the signs of preterm labor with health care providers, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Did health care provider discuss signs/symptoms of preterm labor?				
No	360	15440	21.4	18.6 , 24.1
Yes, before preterm labor	979	52939	73.3	70.3 , 76.3
Yes, because of preterm labor	75	3829	5.3	3.7 , 6.9

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Table 40. From survey questions 69-71, Prevalence of prior cesarean delivery, mode of delivery for current birth, and source of cesarean request, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Previous C-section (among multiparas)				
No	550	27683	71.5	67.2 , 75.7
Yes	237	11058	28.5	24.3 , 32.8
Mode of delivery (current birth)				
Vaginal	950	47980	65.7	62.4 , 69.1
C-section with labor	245	12398	17.0	14.3 , 19.6
C-section with no labor	235	12621	17.3	14.6 , 20.0
Who requested c-section? (among those with csec)				
Health care provider before delivery	199	10351	42.7	36.6 , 48.8
Health care provider during delivery	204	10618	43.8	37.7 , 50.0
Mother before delivery	54	2840	11.7	7.7 , 15.8
Mother during delivery	8	413	1.7	0.1 , 3.3

Table 41. From survey question 72, Infant sleep location and bed sharing, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Where does baby sleep?				
Crib/bassinet	1063	56824	80.7	77.9 , 83.4
Adult bed with another person	274	10940	15.5	13.1 , 18.0
Adult bed alone	5	220	0.3	0.0 , 0.7
Sofa/couch	3	215	0.3	0.0 , 0.8
Carseat	17	1145	1.6	0.7 , 2.6
Elsewhere	18	1113	1.6	0.7 , 2.5

## APPENDIX A. Supplemental Data Tables

Table 42. From survey question 73, Prevalence of infant safety practices, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Safety practices				
Baby brought home in carseat				
No	10	372	0.5	0.1 , 1.0
Yes	1398	71091	99.5	99.0 , 99.9
Always/almost always rides in carseat				
No	12	337	0.5	0.1 , 0.8
Yes	1398	71243	99.5	99.2 , 99.9
Home has working smoke alarm				
No	27	1035	1.5	0.0 , 4.3
Yes	1375	70355	98.5	95.7 , 100.0
Loaded firearms in house				
No	1374	69490	97.1	91.4 , 100.0
Yes	31	2081	2.9	0.0 , 8.6

Table 43. From survey questions 74-75, Prevalence of maternal post-partum depressive symptoms and help-seeking for post-partum depression, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Post partum depressive symptoms (depressed)				
Always	26	1079	1.5	0.7 , 2.2
Often/Almost always	95	4405	6.0	4.4 , 7.7
Sometimes	380	17125	23.5	20.6 , 26.4
Rarely	480	29304	40.2	36.8 , 43.6
Never	444	20987	28.8	25.7 , 31.9
Post partum depressive symptoms (loss of interest in activities)				
Always	76	2718	3.8	2.6 , 4.9
Often/Almost always	99	4561	6.3	4.6 , 8.0
Sometimes	327	13483	18.6	16.0 , 21.1
Rarely	454	25907	35.7	32.3 , 39.1
Never	470	25893	35.7	32.3 , 39.1
Mother sought help for depression (population)				
No	1296	65986	90.3	88.3 , 92.4
Yes	135	7067	9.7	7.6 , 11.7

## APPENDIX A. Supplemental Data Tables

Table 44. From survey question 76, Prevalence of maternal health insurance types post-partum, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Mother insurance (current)				
Medicaid	600	24386	33.3	30.2 , 36.4
Private insurance/HMO	760	45752	62.4	59.3 , 65.6
Other	88	4797	6.5	4.7 , 8.3
No Insurance	0	0	0.0	0.0 , 0.0

Table 45. From survey questions 77-78, Prevalence of maternal disability status and length of disability, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Maternal disability				
No	1346	68664	94.7	93.0 , 96.3
Yes	72	3851	5.3	3.7 , 7.0
Days disabled				
Non-disabled	1346	68664	95.9	94.4 , 97.4
1 to 29 days	9	288	0.4	0.1 , 0.8
30+ days	41	2641	3.7	2.2 , 5.2

Table 46. From survey questions 79-80, Prevalence of maternal teeth cleaning, prior to, during, and after pregnancy, 2007 MA PRAMS

Question	Sample n	Weighted n	Weighted %	95% CL
Dental Care				
Ever had teeth cleaned	1258	67394	89.9	88.1 , 91.6
Had teeth cleaned since baby was born	391	22002	29.3	26.2 , 32.5
Had teeth cleaned during pregnancy	525	31144	41.5	38.1 , 44.9
Had teeth cleaned in year before becoming pregnant	852	47705	63.6	60.4 , 66.8

## APPENDIX A. Supplemental Data Tables

### Technical notes

#### **Confidence limits and statistical significance:**

For the 2007 PRAMS report, we calculated 95% confidence limits around population estimates, using the point estimates and their standard errors. When comparing prevalences across different socio-demographic subgroups, estimates with non-, or minimally-overlapping confidence limits were considered statistically significant. Differences in estimates between subgroups were presented as such when they were statistically significant, but in some cases were noted when the differences were not statistically significant but worth noting due to the potential public health impact.

#### **Weighted-n:**

Most data tables in this report present a “weighted n” which represents an estimate of the actual number of people affected by a behavior, condition or outcome in the Massachusetts population. PRAMS samples a small fraction of new mothers in the state, and as a result, our data are weighted to make estimates which represent the sampling frame from which our sample was drawn.

#### **Calculation of household Federal Poverty Level (FPL)**

Because we wished to examine differences in health by household income level, each respondent’s household Federal Poverty Level (FPL) was approximated using self-reported income (as a range) and the number of dependent household members, comparing these to the 2007 Department of Health and Human Services Federal Poverty guidelines (DHHS, 2007). Because exact dollar amounts were not reported by respondents, we used the mid-point of each income range to approximate household income. Thus, our estimated household poverty level should be viewed as approximate, and may misclassify some households.

**Appendix B.**  
Massachusetts PRAMS Survey, 2007

# APPENDIX B. Massachusetts PRAMS Survey

1

First, we would like to ask a few questions about you and the time before you got pregnant with your new baby. Please check the box next to your answer.

1. *Just before you got pregnant, did you have health insurance?* Do not count Medicaid (MassHealth).

- No
- Yes

2. *Just before you got pregnant, were you on Medicaid (MassHealth)?*

- No
- Yes

3. *During the month before you got pregnant with your new baby, how many times a week did you take a multivitamin or a prenatal vitamin?* These are pills that contain many different vitamins and minerals.

- I didn't take a multivitamin or a prenatal vitamin at all
- 1 to 3 times a week
- 4 to 6 times a week
- Every day of the week

4. What is *your* date of birth?

19  
Month Day Year

5. *Just before you got pregnant with your new baby, how much did you weigh?*

Pounds OR  Kilos

6. How tall are you without shoes?

Feet  Inches

OR  Centimeters

7. Would you say that, in general, your health is—

- Excellent
- Very good
- Good
- Fair
- Poor

8. *Before you got pregnant with your new baby, did you ever have any other babies who were born alive?*

- No → Go to Page 2, Question 11
- Yes

9. Did the baby born *just before your new one weigh 5 pounds, 8 ounces (2.5 kilos) or less at birth?*

- No
- Yes

10. Was the baby *just before your new one born more than 3 weeks before its due date?*

- No
- Yes

## APPENDIX B. Massachusetts PRAMS Survey

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The next questions are about the time when you got pregnant with your *new* baby.

11. Thinking back to *just before* you got pregnant with your *new* baby, how did you feel about becoming pregnant?

Check one answer

- I wanted to be pregnant sooner
- I wanted to be pregnant later
- I wanted to be pregnant then
- I didn't want to be pregnant then or at any time in the future

12. When you got pregnant with your new baby, were you trying to get pregnant?

- No
- Yes

Go to Question 15

13. When you got pregnant with your new baby, were you or your husband or partner doing anything to keep from getting pregnant?

(Some things people do to keep from getting pregnant include not having sex at certain times [rhythm] or withdrawal, and using birth control methods such as the pill, condoms, cervical ring, IUD, having their tubes tied, or their partner having a vasectomy.)

- No
- Yes

Go to Question 17

14. What were your or your husband's or partner's reasons for not doing anything to keep from getting pregnant?

Check all that apply

- I didn't mind if I got pregnant
- I thought I could not get pregnant at that time
- I had side effects from the birth control method I was using
- I had problems getting birth control when I needed it
- I thought my husband or partner or I was sterile (could not get pregnant at all)
- My husband or partner didn't want to use anything
- Other \_\_\_\_\_ Please tell us:

If you were not trying to get pregnant when you got pregnant with your new baby, go to Question 17.

15. Did you receive treatment from a doctor, nurse, or other health care worker to help you get pregnant with your new baby?

(This may include infertility treatments such as fertility-enhancing drugs or assisted reproductive technology.)

- No
- Yes

Go to Question 17

# APPENDIX B. Massachusetts PRAMS Survey

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**16. Did you use any of the following treatments during the month you got pregnant with your new baby?**

**Check all that apply**

- Fertility-enhancing drugs prescribed by a doctor (fertility drugs include Clomid®, Serophene®, Pergonal®, or other drugs that stimulate ovulation)
- Artificial insemination or intrauterine insemination (treatments in which sperm, but NOT eggs, were collected and medically placed into a woman's body)
- Assisted reproductive technology (treatments in which BOTH a woman's eggs and a man's sperm were handled in the laboratory, such as in vitro fertilization [IVF], gamete intrafallopian transfer [GIFT], zygote intrafallopian transfer [ZIFT], intracytoplasmic sperm injection [ICSI], frozen embryo transfer, or donor embryo transfer)
- Other medical treatment ————— ➔ Please tell us:  
\_\_\_\_\_

The next questions are about the prenatal care you received during your most recent pregnancy. Prenatal care includes visits to a doctor, nurse, or other health care worker before your baby was born to get checkups and advice about pregnancy. (It may help to look at the calendar when you answer these questions.)

**17. How many weeks or months pregnant were you when you were *sure* you were pregnant?** (For example, you had a pregnancy test or a doctor or nurse said you were pregnant.)

\_\_\_\_\_ Weeks OR \_\_\_\_\_ Months

I don't remember

**18. How many weeks or months pregnant were you when you had your first visit for prenatal care?** Do not count a visit that was only for a pregnancy test or only for WIC (the Special Supplemental Nutrition Program for Women, Infants, and Children).

\_\_\_\_\_ Weeks OR \_\_\_\_\_ Months

I didn't go for prenatal care

# APPENDIX B. Massachusetts PRAMS Survey

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**19. Did you get prenatal care as early in your pregnancy as you wanted?**

- No
- Yes
- I didn't want prenatal care

**Go to Question 21**

**20. Here is a list of problems some women can have getting prenatal care.** For each item, circle **Y** (Yes) if it was a problem for you during your most recent pregnancy or circle **N** (No) if it was not a problem or did not apply to you.

	No	Yes
a. I couldn't get an appointment when I wanted one . . . . .	N	Y
b. I didn't have enough money or insurance to pay for my visits . . . . .	N	Y
c. I had no way to get to the clinic or doctor's office . . . . .	N	Y
d. I couldn't take time off from work . . . . .	N	Y
e. The doctor or my health plan would not start care as early as I wanted . . . . .	N	Y
f. I didn't have my Medicaid (MassHealth) card . . . . .	N	Y
g. I had no one to take care of my children . . . . .	N	Y
h. I had too many other things going on . . . . .	N	Y
i. I didn't want anyone to know I was pregnant . . . . .	N	Y
j. Other . . . . .	N	Y

Please tell us:

**If you did not go for prenatal care, go to Question 23.**

**21. How was your prenatal care paid for?**

**Check all that apply**

- Medicaid (MassHealth)
- Personal income (cash, check, or credit card)
- Health insurance or HMO (including insurance from your work or your husband's/partner's work)
- Free Care
- Other —————> Please tell us:

# APPENDIX B. Massachusetts PRAMS Survey

**22. During any of your prenatal care visits, did a doctor, nurse, or other health care worker talk with you about any of the things listed below?** Please count only discussions, not reading materials or videos. For each item, circle **Y** (Yes) if someone talked with you about it or circle **N** (No) if no one talked with you about it.

	No	Yes
a. How smoking during pregnancy could affect my baby.....	N	Y
b. Breastfeeding my baby.....	N	Y
c. How drinking alcohol during pregnancy could affect my baby.....	N	Y
d. Using a seat belt during my pregnancy.....	N	Y
e. Birth control methods to use after my pregnancy.....	N	Y
f. Medicines that are safe to take during my pregnancy.....	N	Y
g. How using illegal drugs could affect my baby.....	N	Y
h. Doing tests to screen for birth defects or diseases that run in my family....	N	Y
i. What to do if my labor starts early....	N	Y
j. Getting tested for HIV (the virus that causes AIDS).....	N	Y
k. Physical abuse to women by their husbands or partners.....	N	Y

**23. At any time during your most recent pregnancy or delivery, did you have a test for HIV (the virus that causes AIDS)?**

- No
- Yes → **Go to Question 27**
- I don't know

**24. Were you offered an HIV test during your most recent pregnancy or delivery?**

- No → **Go to Question 27**
- Yes

**25. Did you turn down the HIV test?**

- No → **Go to Question 27**
- Yes

**26. Why did you turn down the HIV test?**

**Check all that apply**

- I did not think I was at risk for HIV
- I did not want people to think I was at risk for HIV
- I was afraid of getting the result
- I was tested before this pregnancy, and did not think I needed to be tested again
- Other → Please tell us:

---

The next questions are about your most recent pregnancy and things that might have happened during your pregnancy.

**27. During your most recent pregnancy, were you on WIC (the Special Supplemental Nutrition Program for Women, Infants, and Children)?**

- No
- Yes

## APPENDIX B. Massachusetts PRAMS Survey

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**28. Did you have any of these problems during your most recent pregnancy?** For each item, circle **Y** (Yes) if you had the problem or circle **N** (No) if you did not.

	No	Yes
a. High blood sugar (diabetes) that started <i>before</i> this pregnancy . . . . .	N	Y
b. High blood sugar (diabetes) that started <i>during</i> this pregnancy . . . . .	N	Y
c. Vaginal bleeding . . . . .	N	Y
d. Kidney or bladder (urinary tract) infection . . . . .	N	Y
e. Severe nausea, vomiting, or dehydration . . . . .	N	Y
f. Cervix had to be sewn shut (incompetent cervix) . . . . .	N	Y
g. High blood pressure, hypertension (including pregnancy-induced hypertension [PIH], preeclampsia, or toxemia) . . . . .	N	Y
h. Problems with the placenta (such as abruptio placentae or placenta previa) . . . . .	N	Y
i. Labor pains more than 3 weeks before my baby was due (preterm or early labor) . . . . .	N	Y
j. Water broke more than 3 weeks before my baby was due (premature rupture of membranes [PROM]) . . . . .	N	Y
k. I had to have a blood transfusion . . . . .	N	Y
l. I was hurt in a car accident . . . . .	N	Y

**If you did not have any of these problems, go to Question 30.**

**29. Did you do any of the following things because of these problems?** For each item, circle **Y** (Yes) if you did that thing or circle **N** (No) if you did not.

	No	Yes
a. I went to the hospital or emergency room and stayed less than 1 day . . . . .	N	Y
b. I went to the hospital and stayed 1 to 7 days . . . . .	N	Y
c. I went to the hospital and stayed more than 7 days . . . . .	N	Y
d. I stayed in bed at home more than 2 days because of my doctor's or nurse's advice . . . . .	N	Y

**The next questions are about smoking cigarettes and drinking alcohol.**

**30. Have you smoked at least 100 cigarettes in the past 2 years?** (A pack has 20 cigarettes.)

- No → **Go to Question 34**  
 Yes

**31. In the 3 months before you got pregnant, how many cigarettes did you smoke on an average day?** (A pack has 20 cigarettes.)

- 41 cigarettes or more  
 21 to 40 cigarettes  
 11 to 20 cigarettes  
 6 to 10 cigarettes  
 1 to 5 cigarettes  
 Less than 1 cigarette  
 None (0 cigarettes)

## APPENDIX B. Massachusetts PRAMS Survey

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**32. In the last 3 months of your pregnancy, how many cigarettes did you smoke on an average day? (A pack has 20 cigarettes.)**

- 41 cigarettes or more
- 21 to 40 cigarettes
- 11 to 20 cigarettes
- 6 to 10 cigarettes
- 1 to 5 cigarettes
- Less than 1 cigarette
- None (0 cigarettes)

**33. How many cigarettes do you smoke on an average day now? (A pack has 20 cigarettes.)**

- 41 cigarettes or more
- 21 to 40 cigarettes
- 11 to 20 cigarettes
- 6 to 10 cigarettes
- 1 to 5 cigarettes
- Less than 1 cigarette
- None (0 cigarettes)

**34. Have you had any alcoholic drinks in the past 2 years? (A drink is 1 glass of wine, wine cooler, can or bottle of beer, shot of liquor, or mixed drink.)**

- No —→ **Go to Page 8, Question 37**
- Yes

**35a. During the 3 months before you got pregnant, how many alcoholic drinks did you have in an average week?**

- 14 drinks or more a week
- 7 to 13 drinks a week
- 4 to 6 drinks a week
- 1 to 3 drinks a week
- Less than 1 drink a week
- I didn't drink then

**35b. During the 3 months before you got pregnant, how many times did you drink 5 alcoholic drinks or more in one sitting?**

- 6 or more times
- 4 to 5 times
- 2 to 3 times
- 1 time
- I didn't have 5 drinks or more in 1 sitting
- I didn't drink then

**36a. During the last 3 months of your pregnancy, how many alcoholic drinks did you have in an average week?**

- 14 drinks or more a week
- 7 to 13 drinks a week
- 4 to 6 drinks a week
- 1 to 3 drinks a week
- Less than 1 drink a week
- I didn't drink then

**36b. During the last 3 months of your pregnancy, how many times did you drink 5 alcoholic drinks or more in one sitting?**

- 6 or more times
- 4 to 5 times
- 2 to 3 times
- 1 time
- I didn't have 5 drinks or more in 1 sitting
- I didn't drink then

## APPENDIX B. Massachusetts PRAMS Survey

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Pregnancy can be a difficult time for some women. The next question is about things that may have happened before and during your most recent pregnancy.

**37. This question is about things that may have happened during the 12 months before your new baby was born.** For each item, circle Y (Yes) if it happened to you or circle N (No) if it did not. (It may help to use the calendar.)

	No	Yes
a. A close family member was very sick and had to go into the hospital . . . . .	N	Y
b. I got separated or divorced from my husband or partner . . . . .	N	Y
c. I moved to a new address . . . . .	N	Y
d. I was homeless . . . . .	N	Y
e. My husband or partner lost his job . . . . .	N	Y
f. I lost my job even though I wanted to go on working . . . . .	N	Y
g. I argued with my husband or partner more than usual . . . . .	N	Y
h. My husband or partner said he didn't want me to be pregnant . . . . .	N	Y
i. I had a lot of bills I couldn't pay . . . . .	N	Y
j. I was in a physical fight . . . . .	N	Y
k. I or my husband or partner went to jail . . . . .	N	Y
l. Someone very close to me had a bad problem with drinking or drugs . . . . .	N	Y
m. Someone very close to me died . . . . .	N	Y

The next questions are about the time during the *12 months before* you got pregnant with your new baby.

**38a. During the 12 months before you got pregnant, did an ex-husband or ex-partner push, hit, slap, kick, choke, or physically hurt you in any other way?**

- No
- Yes

**38b. During the 12 months before you got pregnant, were you physically hurt in any way by your husband or partner?**

- No
- Yes

The next questions are about the time during your most recent pregnancy.

**39a. During your most recent pregnancy, did an ex-husband or ex-partner push, hit, slap, kick, choke, or physically hurt you in any other way?**

- No
- Yes

**39b. During your most recent pregnancy, were you physically hurt in any way by your husband or partner?**

- No
- Yes

# APPENDIX B. Massachusetts PRAMS Survey

The next questions are about your labor and delivery. (It may help to look at the calendar when you answer these questions.)

### 40. When was your baby due?

<input type="text"/>	<input type="text"/>	<input type="text"/>
Month	Day	Year

### 41. When did you go into the hospital to have your baby?

<input type="text"/>	<input type="text"/>	<input type="text"/>
Month	Day	Year

I didn't have my baby in a hospital

### 42. When was your baby born?

<input type="text"/>	<input type="text"/>	<input type="text"/>
Month	Day	Year

### 43. When were you discharged from the hospital after your baby was born? (It may help to use the calendar.)

<input type="text"/>	<input type="text"/>	<input type="text"/>
Month	Day	Year

I didn't have my baby in a hospital

### 44. How was your delivery paid for?

**Check all that apply**

- Medicaid (MassHealth)
- Personal income (cash, check, or credit card)
- Health insurance or HMO (including insurance from your work or your husband's/partner's work)
- Free Care
- Other → Please tell us:

The next questions are about the time since your new baby was born.

### 45. After your baby was born, was he or she put in an intensive care unit?

- No
- Yes
- I don't know

### 46. After your baby was born, how long did he or she stay in the hospital?

- Less than 24 hours (less than 1 day)
- 24 to 48 hours (1 to 2 days)
- 3 days
- 4 days
- 5 days
- 6 days or more
- My baby was not born in a hospital
- My baby is still in the hospital →

**Go to Page 10, Question 49**

## APPENDIX B. Massachusetts PRAMS Survey

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47. Is your baby alive now?

- No —————> **Go to Question 58**  
 Yes

48. Is your baby living with you now?

- No —————> **Go to Question 58**  
 Yes

49. Did you ever breastfeed or pump breast milk to feed your new baby after delivery?

- No —————> **Go to Question 53**  
 Yes

50. Are you still breastfeeding or feeding pumped milk to your new baby?

- No  
 Yes —————> **Go to Question 52**

51. How many weeks or months did you breastfeed or pump milk to feed your baby?

- \_\_\_\_ Weeks OR \_\_\_\_ Months  
 Less than 1 week

52. How old was your baby the first time you fed him or her anything besides breast milk? Include formula, baby food, juice, cow's milk, water, sugar water, or anything else you fed your baby.

- \_\_\_\_ Weeks OR \_\_\_\_ Months  
 My baby was less than 1 week old  
 I have not fed my baby anything besides breast milk

**If your baby is still in the hospital, go to Question 57.**

53. About how many hours a day, on average, is your new baby in the same room with someone who is smoking?

- \_\_\_\_ Hours  
 Less than 1 hour a day  
 My baby is never in the same room with someone who is smoking

54. How do you *most often* lay your baby down to sleep now?

**Check one answer**

- On his or her side  
 On his or her back  
 On his or her stomach

55. Was your new baby seen by a doctor, nurse, or other health care worker during the first week after he or she left the hospital?

- No  
 Yes

56. Has your new baby had a well-baby checkup? (A well-baby checkup is a regular health visit for your baby usually at 2, 4, or 6 months of age.)

- No  
 Yes

# APPENDIX B. Massachusetts PRAMS Survey

**57. What type of health insurance is your new baby covered by right now?**

**Check all that apply**

- Medicaid (MassHealth)
- Private insurance or HMO (including insurance from your work or your husband's/partner's work)
- Other —————> Please tell us:
- My new baby does not have health insurance

**58. Are you or your husband or partner doing anything *now* to keep from getting pregnant?**  
(Some things people do to keep from getting pregnant include not having sex at certain times [rhythm] or withdrawal, and using birth control methods such as the pill, condoms, cervical ring, IUD, having their tubes tied, or their partner having a vasectomy.)

- No
- Yes —————> **Go to Question 60**

**59. What are your or your husband's or partner's reasons for not doing anything to keep from getting pregnant *now*?**

**Check all that apply**

- I am not having sex
- I want to get pregnant
- I don't want to use birth control
- My husband or partner doesn't want to use anything
- I don't think I can get pregnant (sterile)
- I can't pay for birth control
- I am pregnant now
- Other —————> Please tell us:

**60. Since your new baby was born, have you had a postpartum checkup for yourself?**  
(A postpartum checkup is the regular checkup a woman has after she gives birth.)

- No
- Yes

The next few questions are about the time during the *12 months before* your new baby was born.

**61. During the *12 months before* your new baby was born, what were the sources of your household's income?**

**Check all that apply**

- Paycheck or money from a job
- Money from family or friends
- Money from a business, fees, dividends, or rental income
- Aid such as Temporary Assistance for Needy Families (TANF), welfare, WIC, public assistance, general assistance, food stamps, or Supplemental Security Income
- Unemployment benefits
- Child support or alimony
- Social security, workers' compensation, disability, veteran benefits, or pensions
- Other —————> Please tell us:

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**62. During the 12 months before your new baby was born, what was your total household income before taxes?** Include your income, your husband's or partner's income, and any other income you may have used. (All information will be kept private and will not affect any services you are now getting.)

Check one answer

- Less than \$10,000
- \$10,000 to \$14,999
- \$15,000 to \$19,999
- \$20,000 to \$24,999
- \$25,000 to \$34,999
- \$35,000 to \$49,999
- \$50,000 or more

**63. During the 12 months before your new baby was born, how many people, including yourself, depended on this income?**

People

The next few questions are on a variety of topics.

**64. Before you got pregnant with your new baby, had you ever heard or read about emergency birth control (the "morning-after pill")?** This combination of pills is used to prevent pregnancy up to 3 days after unprotected sex.

- No
- Yes

**65. During the 3 months before you got pregnant with your new baby, how often did you participate in any physical activities or exercise for 30 minutes or more?** (For example, walking for exercise, swimming, cycling, dancing, or gardening.) Do not count exercise you may have done as part of your regular job.

- Less than 1 day per week
- 1 to 4 days per week
- 5 or more days per week

**66. During the last 3 months of your most recent pregnancy, how often did you participate in any physical activities or exercise for 30 minutes or more?** Do not count exercise you may have done as part of your regular job.

- Less than 1 day per week
- 1 to 4 days per week
- 5 or more days per week
- I was told by a doctor, nurse, or other health care worker not to exercise

**67. During the last 3 months of your most recent pregnancy, about how many servings of fruits or vegetables did you have in a day?**

Check one answer

- Less than 1 serving per day
- 1 or 2 servings per day
- 3 or 4 servings per day
- 5 or more servings per day

# APPENDIX B. Massachusetts PRAMS Survey

**68. During your most recent pregnancy, did a doctor, nurse, or other health care worker talk with you about the signs and symptoms of preterm labor?** (Preterm labor is defined as early labor more than 3 weeks before the baby is due.)

- No
- Yes, before I went into labor
- Yes, because I was in preterm labor

**69. Before you had your new baby, did you ever have a baby by cesarean delivery (when a doctor cuts through the mother's belly to bring out the baby)?**

- No
- Yes

**70. How was your new baby delivered?**

- Vaginally → **Go to Question 72**
- I went into labor but had to have a cesarean delivery
- I didn't go into labor and had to have a cesarean delivery

**71. Whose idea was it for you to have a cesarean delivery?** Please select the choice that best describes whose idea it was.

**Check one answer**

- My health care provider recommended a cesarean delivery before I went into labor
- My health care provider recommended a cesarean delivery while I was in labor
- Mine, I wanted the cesarean delivery before I went into labor
- Mine, I asked for the cesarean delivery while I was in labor

**If your baby is not alive or is not currently living with you, go to Page 14, Question 74a.**

**72. In the last month, where did your new baby usually sleep?**

**Check one answer**

- In a crib, cradle, or bassinet
- On an adult bed or mattress with you or another person(s)
- On an adult bed or mattress alone
- On a sofa or couch
- In a car seat or infant seat
- Someplace else → Please tell us:

**73. Listed below are some statements about safety.** For each one, circle **Y** (Yes) if it applies to you or circle **N** (No) if it does not.

		No	Yes
a. My infant was brought home from the hospital in an infant car seat . . . .	N		Y
b. My baby always or almost always rides in an infant car seat . . . . .	N		Y
c. My home has a working smoke alarm . . . . .	N		Y
d. There are <b>loaded</b> guns, rifles, or other firearms in my home . . . . .	N		Y

## APPENDIX B. Massachusetts PRAMS Survey

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**74a. Since your new baby was born, how often have you felt down, depressed, or hopeless?**

- Always
- Often
- Sometimes
- Rarely
- Never

**74b. Since your new baby was born, how often have you had little interest or little pleasure in doing things?**

- Always
- Often
- Sometimes
- Rarely
- Never

**75. Since your new baby was born, did you seek help for depression from a doctor, nurse, or other health care worker?**

- No
- Yes

**76. What type of health insurance are you covered by right now?**

**Check all that apply**

- Medicaid (MassHealth)
- Private insurance or HMO (including insurance from your work or your husband's/partner's work)
- Other → Please tell us:
- I do not have health insurance

**77. Are you limited in any way in any activities because of physical, mental, or emotional problems?**

- No → Go to Question 79
- Yes

**78. For how long have your activities been limited because of physical, mental, or emotional problems?**

- Number of Days **OR**
- Number of Weeks **OR**
- Number of Months **OR**
- Number of Years

**79. Have you ever had your teeth cleaned by a dentist or dental hygienist?**

- No → Go to Question 81
- Yes

**80. When did you have your teeth cleaned by a dentist or dental hygienist? For each of the three time periods, circle Y (Yes) if you had your teeth cleaned then or circle N (No) if you did not have your teeth cleaned then.**

- |   |   | No | Yes |
|---|---|----|-----|
| a. Within a year before I became pregnant ..... | N | Y  |     |
| b. During my most recent pregnancy ...          | N | Y  |     |
| c. After my most recent pregnancy .....         | N | Y  |     |

**81. What is today's date?**

- Month
- Day
- Year

## APPENDIX B. Massachusetts PRAMS Survey

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**Please use this space for any additional comments you would like to make about the health of mothers and babies in Massachusetts.**

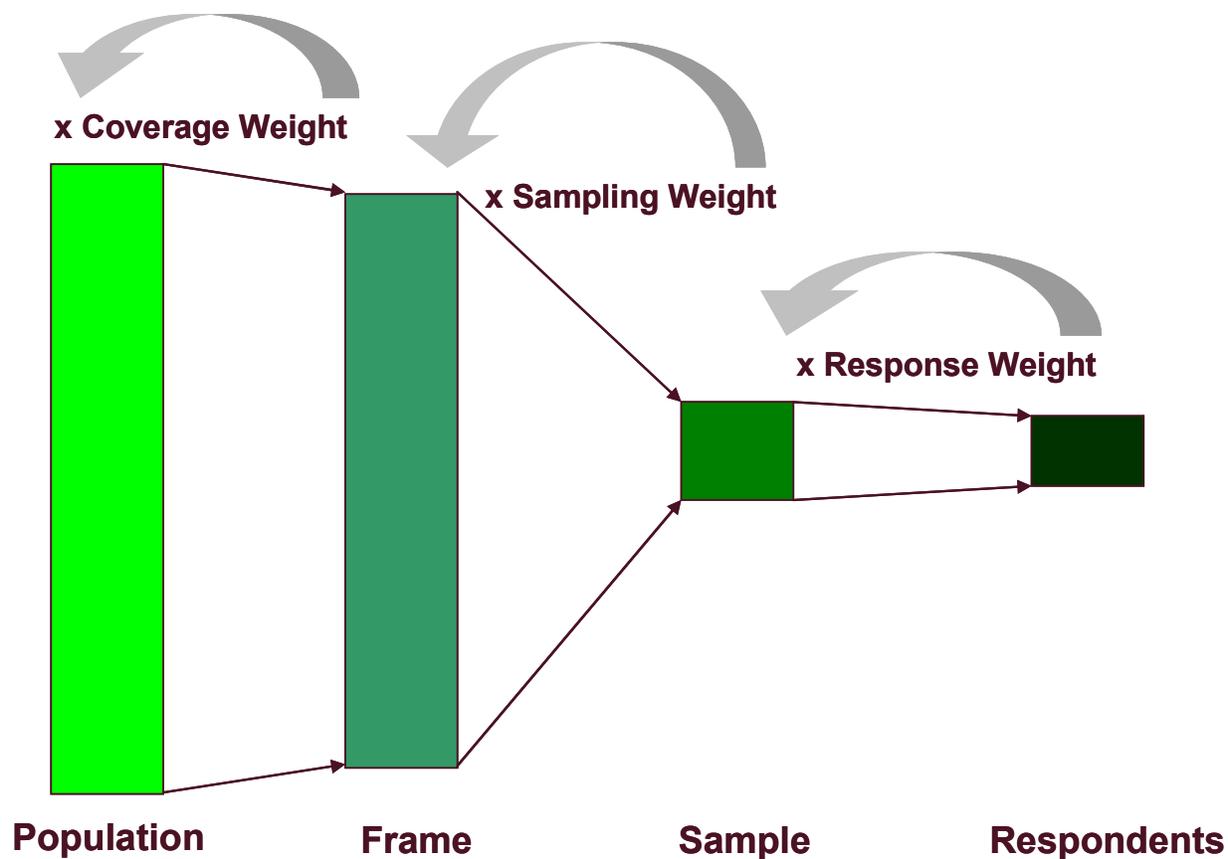
*Thanks for answering our questions!  
Your answers will help us work to make Massachusetts  
mothers and babies healthier.*

November 9, 2006

**Appendix C.**  
Massachusetts PRAMS 2007  
Weighting Rubric

## APPENDIX C. PRAMS weighting system

Figure 60. PRAMS Data Weighting Illustration\*



Population: Total births to Massachusetts resident women

Frame: Massachusetts resident women who recently gave birth to a live infant. Women with twins or triplets are only included in the frame once.

Sample: Women selected from the frame to participate in PRAMS

Respondents: Women who completed a PRAMS survey by mail or telephone

Final Weight = Response Weight \* Sampling Weight \* Coverage Weight

\*Figure adapted from CDC PRAMS protocol.

**Appendix D.**  
Massachusetts PRAMS 2007  
Adequacy of Prenatal Care  
Utilization Index

## APPENDIX D: Adequacy of Prenatal Care Utilization Index

The Adequacy of Prenatal Care Utilization (APNCU) Index, (Kotelchuck, 1994) developed by Dr. Milton Kotelchuck, is the measure used in Healthy People 2010 and by the majority of states.

The Index characterizes prenatal care (PNC) utilization by measuring two distinct components of prenatal care — adequacy of initiation and adequacy of received services (visits). Each is measured as an independent index, and the APNCU Index is a composite of these two component indices. The APNCU Index characterizes care using five categories: “adequate intensive,” “adequate basic,” “intermediate,” “inadequate,” and “unknown.” The Index does not assess quality of the prenatal care delivered, only utilization.

### Adequacy of Prenatal Care Utilization (APNCU) Index: Definition of Categories

Category	Month Prenatal Care Began	% of Expected <sup>1</sup> Prenatal Care Visits
Adequate Intensive	1, 2, 3, or 4	110% or more
Adequate Basic	1, 2, 3, or 4	80 – 109%
Intermediate	1, 2, 3, or 4	50 – 79%
Inadequate	Month 5 or later	Less than 50%
Unknown	Prenatal care information not recorded	

<sup>1</sup> The number of “expected” visits is determined based on standards set by the American College of Obstetricians and Gynecologists (ACOG).

**Appendix E.**  
Massachusetts PRAMS 2007  
List of references

## APPENDIX E: List of References

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**Appendix F.**  
Alphabetical List of PRAMS Advisory  
Committee Members

## **APPENDIX F: Alphabetical List of PRAMS Advisory Committee Members**

<b>Name</b>	<b>Organization</b>
Brianne Beagan	Massachusetts Department of Public Health
Ron Benham	Massachusetts Department of Public Health
Lynn Bethel	Massachusetts Department of Public Health
Sandra Broughton	Massachusetts Department of Public Health
Paula Callahan	Massachusetts Department of Children and Families
Jennifer Cochran	Massachusetts Department of Public Health
Rachel Colchamiro	Massachusetts Department of Public Health
Eugene Declercq	Boston University School of Public Health
Karin Downs	Massachusetts Department of Public Health
Milton Kotelchuck	Boston University School of Public Health
Kyra Minihane	March of Dimes, Massachusetts Chapter
Beth Nagy	Massachusetts Department of Public Health
Barbara Namias	North American Indian Center of Boston
Bill O'Connell	Massachusetts Department of Public Health
Holly Hackman	Massachusetts Department of Public Health
G. Mike Portuphy	Massachusetts Department of Public Health
Jane Purtill	Massachusetts Department of Public Health
Snehal Shah	Boston Public Health Commission
Lauren Smith	Massachusetts Department of Public Health
Vincent Smith	Children's Hospital Boston
Nancy Wilber	Massachusetts Department of Public Health